REGIONAL DEVELOPMENT, NICKEL PROCESSING & LABOUR MOBILITY: A COMPARISON OF SUDBURY ON AND LONG HARBOUR NL

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EXECUTIVE SUMMARY

Over the last decade, the 'mobilities turn' has captured the attention of researchers in the social sciences as new technologies in transportation and communications are enhancing the mobility of people, capital, goods and information (Sheller and Urry 2006; Cresswell 2010; 2011; 2012; forthcoming). Put simply, "all the world seems to be on the move" (Sheller and Urry 2006: 207). One topic in this diverse collection of literature is employment-related geographical mobility (E-RGM) also known as labour mobility, long-distance labour mobility (LDLM), commute work, and long-distance commuting (Walsh 2012; Ferguson 2011; Storey 2009). E-RGM takes into account people who commute for work away from their place of residence that involves more than 2 hours daily to more extended absences and journeys lasting weeks, months or even years (Temple et al. 2011). This includes a spectrum of workers from daily commuters, to fly-in/fly-out (FIFO) workers, and temporary foreign workers.

This research has four objectives. The first objective is to explore the nature and extent of employment-related geographical mobility (E-RGM) in the nickel-processing sector in Long Harbour, NL and Sudbury, ON while the second objective is to highlight potential factors influencing mobility in these contexts. The third objective is to assess the impacts of E-RGM on these communities and the final objective is to identify the respective responses to E-RGM by company officials, all levels of government, and other community organizations. Both communities have nickel-processing facilities owned by Brazilian-based Vale, one of the largest nickel producers in the world. This provides an interesting look at the impact of institutional context on E-RGM.

This research is part of Phase I for the Nickel Processing Component in the *On the Move: Employment-Related Geographical Mobility (E-RGM) in the Canadian Context* project (*http://www.onthemovepartnership.ca*). The *On the Move* Partnership includes more than 40 researchers from 17 disciplines and 22 universities across Canada and internationally, working with more than 30 community partners to design and carry out research, interpret results and disseminate findings. *On the Move* is a project of the SafetyNet Centre for Occupational Health & Safety Research at Memorial University funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), the Research Development Corporation of Newfoundland and Labrador (RDC), the Canada Foundation for Innovation (CFI), and numerous universities and partners. Phase II of the Nickel Processing Component will focus on the mobile workers to determine where workers are commuting from and the personal decisions that influence and are made as a result of E-RGM. In Phase III, we will turn our attention to the impacts on source communities and revisit Long Harbour.

E-RGM & COMMUNITY IMPACTS

E-RGM can happen in virtually all sectors and is caused by a variety of factors including personal choices, corporate decisions, government policies, and the nature of the sector. Individuals are increasingly choosing where to live based on their preferences for certain amenities, affordability, and proximity to family among other reasons (Ferguson 2011; Walsh 2012). E-RGM has a number of implications for both source (e.g. place of residence) and host (e.g. place of work) communities. On the one hand, host communities face

increased demands on infrastructure, services, and housing by temporary or transient workers. This can, in turn, increase the cost of living for the people who live in these communities (Markey et al. 2011). Source communities can also face increased development and demands on infrastructure, services and housing associated with E-RGM. While other challenges can include impacts on social and civic life as potential volunteers and municipal councillors are too busy to participate because of their commuting. E-RGM can also cause labour shortage in source communities in a variety of sectors (Storey 2010a; MacDonald et al. 2012; Walsh 2012; Ryser and Halseth 2014).

There are a growing number of responses to these community impacts. For example, the Fair Share Agreement in the Peace River Regional District in British Columbia is dealing with the "fly-through" effects. In the 1990s, the district was experiencing challenges related to the growing oil and gas industry, including increased pressures on infrastructure and services and a highly transient and seasonal workforce. Despite these direct impacts, most of the oil and gas activities were occurring beyond municipal boundaries on private and/or crown land, which eliminated the opportunity to pay for some of these additional costs through an industrial tax base. The Fair Share Agreement is a Memorandum of Understanding between the provincial government and a number of communities in the region. It essentially provides financial resources to assist with increased demands on services and infrastructure in municipalities with no legal authority to access the industrial tax base beyond their boundaries (Markey and Heisler 2011; Markey et al. 2011). Ryser et al. (2014) also provide a comprehensive overview of responses in the Peace River Regional District to a number of challenges caused by megaprojects and E-RGM, including the infrastructure deficit, human and social services provisions, services to industry, and housing issues.

METHODS

The research presented in this report is based on twenty semi-structured and informal key informant interviews that were conducted with nickel processing company officials, union representatives, provincial policymakers, local elected officials, postsecondary education representatives, and economic development officials in Sudbury and Newfoundland. A large part of this research involved the analysis of a variety of documents including development agreements, government press releases, corporate websites, corporate annual reports, social responsibility reports, community liaison notes, corporate speeches and presentations, corporate newsletters, municipal council minutes and other stakeholder reports like the Long Harbour resident survey. Media sources were also searched including CBC NL and Sudbury as well as the *Toronto Star*, the *Globe and Mail*, the St. John's *Telegram*, the *Sudbury Star*, and the *Carbonear Compass* among others for articles and opinion pieces. These documents were used to inform the interview questions and select key informants as well as to provide clarification, corroboration, and expand on the interview material. Like the interviews, documents were analyzed for information on the nature and extent of E-RGM, factors influencing E-RGM including corporate and government policies, community impacts and responses, and more generally the impacts of megaprojects on communities.

CASE STUDIES – GREATER SUDBURY ON AND LONG HARBOUR-MOUNT ARLINGTON HEIGHTS NL

Greater Sudbury ON and Long Harbour-Mount Arlington Heights NL were selected as comparative case studies for several reasons. Both have nickel-processing facilities owned by Brazilian-based Vale, one of the largest nickel producers in the world. Yet practices and outcomes differ despite this common corporate actor. This provides an interesting look at the impact of institutional context on E-RGM. Both are also experiencing construction at their nickel-processing facilities. These two jurisdictions also provide an opportunity to identify how economic history, population size, and relative location can impact the nature and extent of E-RGM as well as the community impacts and responses.

NATURE & EXTENT OF LABOUR MOBILITY

In Long Harbour, the construction phase of the processing facility brought significant mobility to the region across the E-RGM spectrum. This included daily commuters, workers from other parts of the province, workers from across the country, and temporary foreign workers. The official recruitment campaign for the operations phase at Long Harbour started in 2011. By September 2013, the company had hired 246 people including support groups. The company divides their employment figures into two levels of geography – Long Harbour and 50kilometers. Using this division, 8 people were from Long Harbour and 52 were from within 50kilometres. For the processing plant technician positions, the company had received over 4,200 applicants and hired 175 people – 4 from Long Harbour and 34 from within 50kilometres. Based on these numbers, 75 percent of employees reside outside the 50kilometres radius. Anecdotally, we know a number of these workers are commuting from St. John's (information provided by a key informant).

In Sudbury, the construction phase of the Clean AER project originally anticipated needing workers from beyond the local labour market. However with the downscaling of the project, most of the labour needs have so far been filled locally (Key Informant). In terms of nickel processing, according to one key informant, there are roughly 1,634 people employed in direct processing as well as support services between staff, production and maintenance workers with 161 people (9.9 percent) commuting more than two-hours to and from work daily (HR Professional – Mining Industry).

FACTORS INFLUENCING LABOUR MOBILITY

We know from the literature that E-RGM is caused by a variety of factors. In this research, key informants were asked to describe the factors that they thought influence labour mobility. These responses are based on their perceptions and in some instances personal experiences. These factors include: personal preferences and access to amenities, relative location, nature of the occupation, industrial history, the size of the community, scale of the project and labour supply, corporate policies and government policies.

Personal preferences and access to amenities

In Long Harbour and Sudbury, key informants discussed a number of reasons why they thought people choose to commute versus relocating to where they work. Many perceived urban amenities like restaurants and retail as important while others discussed amenities like schools and recreational facilities for families. The lack of amenities was often cited by key informants as one of the major reasons for labour mobility in Long Harbour where

people are choosing to live in St. John's. In Sudbury key informants were quick to highlight educational, medical and retail amenities as possible reasons why people choose to live and work in the city.

Relative location

In Newfoundland, key informants cited Long Harbour's close proximity to other places (particularly St. Johns) and comparative lack of urban amenities as perceived factors influencing labour mobility. Sudbury, on the other hand, is larger in size and comparatively farther from other major centres like Toronto and Ottawa. This might explain why key informants see labour mobility as less of a concern and less widespread. However, one key informant discussed the opportunities for seeing Long Harbour in relation to a larger region that extends beyond the municipal boundaries. They also discussed the challenges in thinking about place as an isolated space that stops at the boundaries of a municipality. As this key informant implies, thinking about place in relation to other places offers new opportunities for community development. It also offers important insights for thinking about planning, transportation and infrastructure issues related to labour mobility.

Nature of the occupation

In Long Harbour, several key informants discussed the temporary nature of construction jobs and how they thought people were unlikely to relocate permanently to Long Harbour while the plant was being built. There is, however, optimism that people will move to the community versus commute once construction is completed and the operations phase is well underway.

Size, scale, & labour

The scale of the construction project in Long Harbour, compared to the size of the community also meant that the local labour market could not fill the demand for labour. In Sudbury, the local labour market has so far met the demand on the construction phase of the Clean AER project according to one key informant. There is less competition for labour from other projects in Sudbury and a larger labour market to pull from. However, one key informant noted there could be a shortage in some trades that are in high demand across the country, like mechanical piping, in later phases of the project (Key Informant).

Industrial history

Most of the Sudbury key informants cited the long historical connection to the mining industry as an important reason why they thought labour mobility in less prevalent in the nickel processing industry. On the other hand, in Long Harbour one key informant explained how they felt too much time had passed since large industry existed in the community and, as a result, most of the working age population had either left or found employment. Thus, they saw labour mobility in the processing facility as a necessity to meet labour demands.

Corporate policies

Most Newfoundland key informants discussed the influence of the "living out allowances" (LOAs) in the construction phase of the processing facility. LOAs often provide daily cash contributions for travel, meals and accommodations if a worker lives beyond a defined

travel zone. Many key informants discussed how workers could profit from the LOA by continuing to commute or by renting short-term accommodations with fellow workers. The LOA combined with the temporary nature of the construction industry can dissuade workers from relocating. Plus, the extra money gained through the LOA can provide a powerful incentive for commuting. The LOA is not being provided to the operators at the nickel processing facility

Another possible influence is the company hiring process for operators. All key informants understood that the local labour market in Long Harbour is too small to fill the demand for labour. However, many raised concerns about how the company's hiring process is perceived to be screening out local workers. According to key informants, the company is using a high performance work system that assesses behaviours, which includes computer based aptitude testing, an interview, and a group assessment. Several key informants noted how this is leading to frustration in the community. According to company officials this hiring process will create a different workplace model, where "all frontline workers – the people on the plant floor – will be expected to work beyond the traditional areas of specialization and move into more general, broadly defined roles with a much more diverse skills set" (Vale 2012b: 10). There was a general perception from key informants that Long Harbour residents will end up working for the contractors that will support the operations versus working for Vale.

Government Policies

There is little publicly available information in the Voisey's Bay Development Agreement between Vale and the Government of NL regarding local employment and the processing facility in Long Harbour. The agreement does, however, ensure that people from the province are given first consideration for employment opportunities (Voisey's Bay Development Agreement 2002; Voisey's Bay Development Agreement 2009; Voisey's Bay Development Agreement 2013). In Sudbury, there are no similar development agreements in place that include the processing facility, most likely due to the age of the mining industry. These types of arrangements are relatively new and are typically negotiated before operations commence.

IMPACTS & RESPONSES TO LABOUR MOBILITY ON HOST & SOURCE COMMUNITIES

As noted earlier, E-RGM has a number of implications for both source and host communities. In this research, key informants highlighted this complexity and noted a number of challenges and opportunities related to housing, traffic and infrastructure, local economic development, community development, corporate-community relations, and corporate operations and productivity. For the most part, these impacts and responses are focused on the host communities of Long Harbour and Placentia due to the limited concern over labour mobility in Sudbury. In some instances, key informants also spoke generally about source communities in Newfoundland and labour mobility between Newfoundland and Alberta.

Housing

A number of housing concerns were raised during the key informant interviews in the Placentia Bay region, especially relating to availability and affordability. At the heart of this

issue are several megaprojects that are occurring simultaneously in the wider region, which is driving up demand for housing. Anticipating this demand in Long Harbour, a 1000-room camp was built onsite for workers while CGI developed a mini-home subdivision for workers and a lodge was also built to house construction managers. Trailers were also noticed on highway 202 leading into Long Harbour and in backyards throughout town, which some key informants noted were used for housing construction workers. Other people described how cabins were even being rented out to workers.

Another related impact of labour mobility was an increase in housing and rental prices. Key informants noted that the high LOAs were driving up the costs of rental properties and in turn creating a crisis for affordable housing. Key informants discussed how higher rents are forcing people not associated with the projects out of their homes while property assessments in Long Harbour-Mount Ellington Heights went up 90 percent. To counteract these challenges, the town stabilized taxes while the Placentia Area Development Association is studying the affordable housing issue in the region.

In Sudbury, housing was initially a concern with the original scale of the Clean AER project. In 2012, Vale submitted a rezoning application to house temporary workers at mines and industrial sites, including the nickel refinery and smelter in Copper Cliff. However, after the decision was made to scale back the Clean AER project, the rezoning application was withdrawn.

Traffic & infrastructure

Traffic concerns are a significant issue related to labour mobility as people move in and out of communities during their daily commutes. Key informants described the 'train of F150s' leaving every morning from St. John's and going out to Long Harbour and other megaprojects in the region. Several people also provided traffic tips about when to travel to and from the region. The biggest challenges cited were the volume of traffic, speeding, and the increased pressure this volume places on municipal infrastructure. For example, Vale estimated that 482 vehicles a day would be moving on and off the site during peak construction with 100 to 150 vehicles moving on and off the site daily during operations (VBNC 2007b). While these estimates are likely conservative, they still represent a huge increase in volume for a small, rural community. In Long Harbour, the community placed an electronic sign leading into town reminding people to slow down. Town officials also had several meetings with the RCMP, Fluor, and Vale to increase police presence on highway 202 and discuss the issue with workers. Likewise in Sudbury, company officials met with the city and Greater Sudbury police to discuss and manage traffic logistics related to the Clean AER construction (Key Informant).

Another key informant discussed how the volume of traffic places increased pressure on the pavement and the infrastructure that's underneath. Key informants were also quick to point out a disconnect between municipal costs related to labour mobility and megaprojects and the revenues they receive to pay for these increased pressures on infrastructure and services. These "drive-through" impacts in Long Harbour and Placentia are similar to the "fly-through" effects described by Storey (2010a; 2014), which take into

account the added costs on communities of having commute workers use services and infrastructure with little to no compensation or benefits.

Local economic development

Key informants also discussed a range of economic spinoffs for businesses. In addition to people spending their LOAs at local B&Bs, hotels and restaurants, some businesses have expanded their operations to accommodate the influx of mobile workers. Others discussed a number of new business start-ups including the Tim Horton's in Placentia and the new restaurants and gas station along the Trans Canada Highway before the turnoff to Placentia and Long Harbour. All attributed this new business activity to the economic benefits of the megaprojects and mobile workers. However, one key informant felt that this economic impact is far less for mobile workers than someone who lives and works fulltime in a community.

Community development

While the previous sections have focused on the impacts on host communities in Placentia Bay, a number of key informants also discussed impacts of labour mobility on community development in source communities in Newfoundland. Key informants in Newfoundland discussed challenges with securing volunteers for local fire departments, coaching, and municipal council because people are too busy or not in the community due to their mobile lives. One key informant described the situation in Newfoundland as foreboding and a house of cards due to the uncertainty associated with labour mobility and its impacts on long-term community development.

Corporate-community relations

One key informant discussed, in general, the potential impacts of not having a large local labour force on corporate-community relations. Their argument is that local employment creates community buy-in and a sense ownership. A lack of local workers, however, has the potential to create tension between the company and the community over other issues like noise, the environment, and infrastructure for example. Labour mobility also raises interesting questions about corporate investment in communities. Do companies invest locally in the host community or do they invest where their workers actually live? Perhaps they don't invest in any 'place' but instead take a more neoliberal approach and invest in individual workers.

Company operations & productivity

The impacts that weather can have on labour mobility and the possible implications for the processing facility in Long Harbour was also discussed. For nearly an entire week during our July interviews, Long Harbour and Placentia were blanketed with fog and under a special weather warning. One key informant noted that if people continue to commute from St. John's and elsewhere, operations and productivity might be impacted if severe weather prevents people from getting to the facility. This raises questions about the costs for local workers who might have to shoulder the absences of workers who live away. Labour mobility, in general, also raises important questions about worker safety on their commute to and from work.

Impacts on workers

While this phase of the research did not look specifically at the impacts on workers and their families, a number of key informants raised several possible concerns. For example, one key informant in Long Harbour discussed how they felt the 12hour shift combined with a commute will take its toll on workers, especially with young families. They speculated that over the next 5 to 10 years people working in processing will get sick of the commute and either move to Long Harbour or other nearby communities. Another possibility is, people will quit and look for work closer to home. In Long Harbour, the town is investing in infrastructure, recreation and beautification projects while the LHDC is securing land for business development and residential development in preparation for those workers and business who might choose to relocate to Long Harbour.

SMALL TOWNS, BIG INDUSTRY: DEALING WITH THE IMPACTS OF MEGAPROJECTS

Much of the discussion in the Placentia Bay region focussed on the impacts of mega-projects in rural communities. While there is certainly hope and optimism that these projects will bring new opportunities to these communities, there is also fear over the impacts and uncertainty on how to capture and secure long-term local benefits. On the one hand, megaproject communities are experiencing new opportunities for local employment, local procurement and business development, increased growth and development as well as corporate investment. In Long Harbour, the company built a new fire hall and donated a fire truck and equipment and their training centre will be donated to the town when operations begin. The town is also receiving a $5million grant in lieu of taxes over a ten year period (2008-2018) for all property owned and leased by Vale within the municipality (Vale 2008b; 2011). However, big projects also bring big impacts and often small communities have less capacity to mitigate the intense development pressures they're facing. That being said, community officials are trying to create new institutions and approaches to deal with these impacts and capture more local benefits. This includes the *Small Towns Big Industry Municipal Partnership* and new relationships between small towns and big industry.

CONCLUSIONS

The first objective of this research was to explore the nature and extent of employment-related geographical mobility (E-RGM) in the nickel-processing sector. In Long Harbour, the construction phase of the processing facility brought significant mobility to the region across the E-RGM spectrum from daily commuters to temporary foreign workers. Thus far, a large number of direct operations employees are also commuting from distances greater than 50kilometres (e.g. from St. John's). However, in Sudbury labour mobility is seen as less prevalent in the nickel-processing operations and local labour has so far met the demand during the construction phase of the Clean AER project. A number of factors were identified that can influence labour mobility including personal preferences and access to amenities, the location of the community in relation to other communities, the nature of the occupation, industrial history, the size of the community, scale of the project and labour supply, corporate policies and government policies. E-RGM was viewed as a necessity in Long Harbour for both the construction and operations phases due to the small supply of local labour compared to the scale of the facility. Plus, Long Harbour's close proximity to St. John's was cited as a strong incentive for people to commute daily. On the other hand,

Sudbury's larger size and long history with the mining industry were seen as factors influencing people to live and work in the city.

The second objective of this research was to assess the impacts of E-RGM on these communities, while the third objective was to identify the respective responses to E-RGM by company officials, all levels of government, and other community organizations. These impacts were diverse and complex for both source and host communities. For example, labour mobility can bring increased demand for rental housing and while some benefit economically by renting rooms and properties, others lose as the supply of affordable housing declines. Labour mobility can also bring new opportunities for local economic development and business development, however community development can suffer when people are too busy or tired to participate in civic life due to their mobile lives and schedules. Increased mobility can also place new demands on local infrastructure and services that are not met through the current municipal taxation system. Mobile workers can further impact corporate operations and productivity if transportation is prevented by inclement weather. Another interesting finding is the potential impact mobile workers can have on corporate-community relations whereby local residents might feel little ownership towards a company and its operations due to a lack of local employment.

The general perception is that municipalities are largely unequipped to deal with the dynamic and multifaceted impacts of E-RGM and megaproject development. Despite this, many are trying. For example, the efforts by the Town of Long Harbour and the Long Harbour Development Corporation to encourage local business and resident development, prepare the local workforce, and improve corporate-community relations are impressive. However, more is needed to counteract the impacts these communities are facing. For example, stronger provincial-municipal relations to prevent development agreements and other discussions from happening at the "30,000 foot-level" but not at the local community level. Development agreements and other megaproject planning need to include a much larger and diverse group of stakeholders including municipal, community, and business representatives. Provincial governments also need to be more proactive in sharing resource revenues with local communities that are impacted by megaproject development and resource development to pay for increased pressures and demands on infrastructure and services. Finally, better formal mechanisms for long-term communications between big industry and small towns are imperative like a Good Neighbour Agreement.

ACKNOWLEDGEMENTS

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INTRODUCTION

Over the last decade, the 'mobilities turn' has captured the attention of researchers in the social sciences as new technologies in transportation and communications are enhancing the mobility of people, capital, goods and information (Sheller and Urry 2006; Cresswell 2010; 2011; 2012; forthcoming). Put simply, "all the world seems to be on the move" (Sheller and Urry 2006: 207). One topic in this diverse collection of literature is employment-related geographical mobility (E-RGM) also known as labour mobility, long-distance labour mobility (LDLM), commute work, and long-distance commuting (Walsh 2012; Ferguson 2011; Storey 2009). E-RGM takes into account people who commute for work away from their place of residence that involves more than 2 hours daily to more extended absences and journeys lasting weeks, months or even years (Temple et al. 2011). This includes a spectrum of workers from daily commuters, to fly-in/fly-out (FIFO) workers, and temporary foreign workers.

This research has four objectives. The first objective is to explore the nature and extent of employment-related geographical mobility (E-RGM) in the nickel-processing sector in Long Harbour, NL and Sudbury, ON while the second objective is to highlight potential factors influencing mobility in these contexts. The third objective is to assess the impacts of E-RGM on these communities and the fourth objective is to identify the respective responses to E-RGM by company officials, all levels of government, and other community organizations. Both communities have nickel-processing facilities owned by Brazilian-based Vale, one of the largest nickel producers in the world. This provides an interesting look at the impact of institutional context (i.e. government policies, economic history, industrial structure etc.) on E-RGM.

This research is also part of Phase I for the Nickel Processing Component in the *On the Move: Employment-Related Geographical Mobility (E-RGM) in the Canadian Context* project (*http://www.onthemovepartnership.ca*). *On the Move* is a SSHRC, Canada Foundation for Innovation, and NL Research Development Corporation-funded, 7-year Partnership Grant investigating the impacts of E-RGM on workplaces, workers and their families, and source and host communities in Canada. It includes more than 45 researchers from 17 disciplines and 24 universities across Canada and internationally, working with more than 30 community partners to design and carry out research, interpret results and disseminate findings. Sectors being investigated include: oil and gas, mining, nickel processing, retail service, health, construction, trucking, shipping, tourism, forestry, and fisheries. As the co-lead of the *Nickel Processing Sector* component with Kelly Vodden (Memorial University – Grenfell Campus), we are particularly interested in studying the impacts of labour mobility on source and host communities as well as the respective responses by companies, unions, local and provincial policymakers, community organizations and other others.

This report is divided into seven sections. The first section provides a brief overview of the literature on E-RGM and community impacts. The second section describes the methods used in this research, which is followed by an introduction to the case study sites - Greater Sudbury and Long Harbour-Mount Arlington Heights. In the fourth section, the nature and extent of labour mobility is identified which is followed by a discussion on a number of potential factors influencing labour mobility in these two communities. The final sections

discuss the impacts and responses of labour mobility on source (e.g. place of residence) and host (e.g. place of work) communities as well as the impacts of megaprojects on small towns.

E-RGM & COMMUNITY IMPACTS

E-RGM can happen in virtually all sectors and is caused by a variety of factors including personal choices, corporate decisions, government policies, and the nature of the sector. Individuals are increasingly choosing where to live based on their preferences for certain amenities, affordability, and proximity to family among other reasons (Ferguson 2011; Walsh 2012). For example, in discussing the rise of fly-in/fly-out mining operations, Storey (2009) explains how many workers (and their families) are no longer content with living in often isolated, remote resource-based towns. Corporate decisions have also played a strong role in the nature and extent of E-RGM. In some instances, like resource extraction, location is defined by access to resources. However, many companies are turning to fly-in/fly-out (FIFO) operations in these remote locations due to the costs of establishing 'new towns' (Storey 2001; 2010a). E-RGM also provides a much larger labour market for companies to draw from and more access to skilled workers. Rolfe and Kinnear (2013) also suggest resource companies favour E-RGM because of practicality (e.g. the remote locations), timelines or contracts, and to avoid service difficulties with having to provide housing and social infrastructure. Likewise, a recent report by the Chamber of Minerals and Energy of Western Australia (2013) argues that FIFO operations and E-RGM are a way to provide choice to the worker in a competitive labour market. Employee choice of where to live and where to work is seen as paramount. They further argue that attracting and retaining workers would be seriously impeded if companies were forced to adopt residential employment.

E-RGM can also arise from government regulations. For example, many policymakers have grown weary of supporting 'new towns' associated with resource development while environmental regulations can also influence the scale of development (Storey 2001; 2010a). Finally, E-RGM can be more prevalent in some sectors like construction where workers have typically followed work and trucking where workers are literally on the move for their work (see also Storey 2001; 2009; Markey et al. 2011). E-RGM in the mining sector is particularly pronounced in the extractive industry both in Canada and internationally (e.g. Australia) (see for example Storey 2001; 2009; 2010a; Markey et al. 2011; Chamber of Minerals and Energy of Western Australia 2013; Rolfe and Kinnear 2013). However, there is little documented about the mineral processing industry and E-RGM.

E-RGM has a number of implications for both source (e.g. place of residence) and host (e.g. place of work) communities. On the one hand, host communities face increased demands on infrastructure, services, and housing by temporary or transient workers. This can, in turn, increase the cost of living for the people who live in these communities (Markey et al. 2011). Storey (2010a; 2014) further describes fly-through and fly-over effects as significant concerns for communities near FIFO operations. "Fly-through" effects take into account the added costs on communities of having commute workers use services and infrastructure with little to no compensation or benefits. "Fly-over" effects, on the other

hand, include communities near FIFO operations being bypassed by benefits like employment and business opportunities that accrue instead to larger metropolitan areas located beyond the boundaries of the resource region. However, E-RGM in host communities can also provide benefits for new business opportunities (e.g. gas stations and rest stops), increased housing development and municipal taxation, rental opportunities, and industrial tax benefits.

Source communities can also face increased development and demands on infrastructure, services and housing associated with E-RGM. While other challenges can include impacts on social and civic life as potential volunteers and municipal councillors are too busy to participate because of their commuting. E-RGM can also cause labour shortage in source communities in a variety of sectors (Storey 2010a; MacDonald et al. 2012; Walsh 2012; Ryser and Halseth 2014). However, there are a number of opportunities for source communities cited in the literature. As Ferguson (2011) notes in his research on mobile workers from Cape Breton, workers did discuss sending remittances home. The head of the Building Trades Council of Cape Breton further estimated that at one point over $3 million dollars a week in remittances was flowing from Alberta to Cape Breton (CBC 2006). While there is a lack of quantitative data on this, it does appear that source communities can benefit from remittances and wage spending. E-RGM is further stemming rural population decline in source communities as people choose to live in areas with fewer employment opportunities and commute to work elsewhere (Storey 2010a; Walsh 2012). Thus, E-RGM introduces both challenges and opportunities for source and host communities and as Walsh (2012) argues, policymakers need to increasingly prepare for mobile workers and develop policies that will support workers, their families, and communities.

There are a growing number of responses to these community impacts. For example, the Fair Share Agreement in the Peace River Regional District in British Columbia is dealing with "fly-through" effects in that region. In the 1990s, the district was experiencing challenges related to the growing oil and gas industry, including increased pressures on infrastructure and services and a highly transient and seasonal workforce. Despite these direct impacts, most of the oil and gas activities were occurring beyond municipal boundaries on private and/or crown land, which eliminated the opportunity to pay for some of these additional costs through an industrial tax base. The Fair Share Agreement is a Memorandum of Understanding between the provincial government and a number of communities in the region. It essentially provides financial resources to assist with increased demands on services and infrastructure in municipalities with no legal authority to access the industrial tax base beyond their boundaries (Markey and Heisler 2011; Markey et al. 2011).

Ryser et al. (2014) also provide a comprehensive overview of responses in the Peace River Regional District to a number of challenges caused by megaprojects, including the infrastructure deficit, human and social services provisions, services to industry, and housing issues. Many of these issues are also prevalent in source communities impacted by E-RGM. In addressing the infrastructure deficit, municipalities are investing in research activities, using official plans and zoning to direct development, working with industry to address water and infrastructure demands, and creating regional roundtables on specific

issues. For human and social services provisions, organizations are developing regional partnerships to share capacities like grant writers, government-postsecondary-and industry partnerships are working on skills training and program expansion, and a Family Friendly Initiative has been developed as a toolkit for businesses to incorporate ideas like flexible work hours. With regards to services for industry, Energy Services B.C. has created a procurement system for industry and a quick pay system has been developed to process invoices online. Finally, for housing, municipalities are encouraging densification (e.g. channelling development into designated areas to prevent uncontrolled expansion), zoning for secondary suites in homes, and providing financial incentives to the private sector. In Australia, E-RGM is also drawing significant attention with several inquiries including the use of 'fly-in, fly-out' (FIFO) workforce practices in regional Australia (House of Representatives Standing Committee on Regional Australia 2013) and a current inquiry into the mental health impacts of FIFO work arrangements as well as resources and networks for mobile workers and their families (http://www.fifofamilies.com.au/; http://www.myfifofamily.com/).

METHODS

The research presented in this report is based on key informant interviews, participant observation, policy analysis, corporate reports, stakeholder reports, and media sources. Twenty semi-structured and informal key informant interviews were conducted with nickel processing company officials, union representatives, provincial policymakers, local elected officials, postsecondary education representatives, and economic development officials in Sudbury and Newfoundland. Potential key informants were identified through corporate websites, government websites, media reports and involvement in regional development. As noted in the introduction, this research is part of Phase I for the Nickel Processing Component in the *On the Move Partnership*. In this Phase, we are primarily concerned with identifying the nature and extent of E-RGM in the nickel-processing sector as well as the community impacts and responses. As a result, I was particularly interested in interviewing people with knowledge about the nickel processing labour force, company policies, local, provincial and federal government policies, and local/regional development.[1] For the most part, I did not encounter any difficulties with recruitment. The one exception was with nickel processing company officials in Newfoundland and Labrador. This was largely due to the timing of the interviews, which conflicted with major milestones at the processing facility (e.g. October 2013 – commissioning and July 2014 – refining). We hope to meet with NL company officials in the next phase of this research.

Ethics approval was received from the Interdisciplinary Committee on Ethics in Human Research (ICHER) at Memorial University on September 20th, 2013 (ICHER # 20140485-AR). Interviews then took place between October 2013 and July 2014 in Sudbury, St. John's, Long Harbour, and the Placentia Bay region that ranged in length from 22 minutes to 1.5 hours. Key informants were asked questions that fit within three general themes:

[1] Phase II of the Nickel Processing Component will focus on the mobile workers to determine where workers are commuting from and the personal decisions that influence and are made as a result of E-RGM. This will also include the impacts on community development (e.g. investing in place and volunteering).

1) Background information about their role, institution or organization;
2) Company policies and/or government policies and labour mobility; and
3) Impacts of labour mobility on the community and related responses.

This semi-structured thematic interview format enabled me to ask questions about labour mobility as well as specific policies, impacts and responses. More importantly, semi-structured interviews are often cited for their flexibility, openness and ability to discuss key topics in an in-depth manner (Schoenberger 1991; Mullings 1999; Sabot 1999). Three interview guides were developed (see Appendix A), which catered to the expertise of the key informant including a guide for company officials, a guide for representatives from host community/ regional development organizations, and a guide for representatives from source community/ regional development organizations. The interviews were transcribed and then coded manually. Each transcript was read and a list of descriptive themes was recorded. This yielded the following categories:

- Nature of E-RGM;
- Extent of E-RGM;
- Factors influencing E-RGM;
- Community impacts;
- Community responses; and
- Impacts of megaprojects.

Each category was further refined to include specific themes that were further broken down to include more detailed opinions and perspectives (for an example refer to Figure 1). Quotations were also highlighted and categorized throughout the coding process.

Figure 1: Coding Example

Community Impacts	• Affordable housing
	• Housing shortages
	• Transportation
	• Infrastructure
	• Labour shortages
	• Safety

A large part of this research involved the analysis of a variety of documents including development agreements, government press releases, corporate websites, corporate annual reports, social responsibility reports, community liaison notes, corporate speeches and presentations, corporate newsletters, municipal council minutes and other stakeholder reports like the Long Harbour resident survey. Media sources were also searched including CBC NL and Sudbury as well as the *Toronto Star*, the *Globe and Mail*, the St. John's *Telegram*, the *Sudbury Star*, and the *Carbonear Compass* among others for articles and opinion pieces. These documents were used to inform the interview questions and select key informants as well as to provide clarification, corroboration, and expand on the interview material. Like the interviews, documents were analyzed for information on the nature and extent of E-

RGM, factors influencing E-RGM including corporate and government policies, community impacts and responses, and more generally the impacts of megaprojects on communities.

CASE STUDIES – GREATER SUDBURY ON AND LONG HARBOUR-MOUNT ARLINGTON HEIGHTS NL

Greater Sudbury ON and Long Harbour-Mount Arlington Heights NL were selected as comparative case studies for several reasons. Both have nickel-processing facilities owned by Brazilian-based Vale, one of the largest nickel producers in the world. Yet practices and outcomes differ despite this common corporate actor. This provides an interesting look at the impact of institutional context on E-RGM. Both are also experiencing construction at their nickel-processing facilities. These two jurisdictions also provide an opportunity to identify how economic history, population size, and relative location impact the nature and extent of E-RGM as well as the community impacts and responses. As seen in Table 1, Sudbury and Long Harbour are quite different with regards to population size, geographic land area, and industrial structure. While Long Harbour is quite small when compared to Sudbury, it is part of the larger Avalon Peninsula region, which has a population of 262,410 people (Statistics Canada 2012a).

Table 1: Socio-Economic Characteristics in Sudbury & Long Harbour

	Greater Sudbury ON	Long Harbour-Mount Arlington Heights NL
Population 2011	160,770	298
Population 2006	158,258	211
2006-2011 population change (%)	1.6%	41.2%
Land Area (sq. km)	3,410.62	18.41
Nickel Industry Profile	11 mines, 2 mills, 2 smelters and 1 refinery	1 processing facility

Source: Statistics Canada 2012b; 2012c based on municipal boundaries.

A Brief History of Greater Sudbury ON

The City of Greater Sudbury is located in Northern Ontario, approximately 390kms north of Toronto or a 4.5hour drive (see Figure 2). The city is perhaps best known as being one of the largest nickel producers in the world. However, Sudbury was initially developed as a Canadian Pacific Rail town when it was used as a depot in 1883 for the forestry industry (Wallace 1993). Legend has it, that a blacksmith struck a rocky outcrop with his pick and discovered mineral deposits. The Canadian Copper Company (subsequently known as Inco and now Vale) was the first major mining company to start production during 1886. Several mining towns, agricultural towns, and a rail town grew around the core known as Sudbury (Saarinen 1971). These communities functioned as a two-tier Regional Municipality until 2001 when they were amalgamated to form the one-tier City of Greater Sudbury. The region grew to a peak population of roughly 170,000 in 1971 when over 18,000 people were directly employed in the mining industry (Hall 2007). Layoffs in the

mining industry started in the late 1970s due to a number of external economic forces (e.g. increased international competition; supply and demand) labour disputes, and new production technologies. By 1981, the major mining companies had cut approximately 10,000 jobs (Buse 1993).

Figure 2: Location of Greater Sudbury

Source: Wikimedia Commons

Nickel processing in the Sudbury region started in the late 1880s. Ore from the mines were run through crushers and then brought to the roasting yards for smelting. This early production included spreading the ore on large roasting beds made of timber that were then set on fire and burned for several weeks to several months. The roasted ore was then taken to the smelter furnace to be fired or blasted, producing a molten mass that would separate into layers. The metals were cooled and shipped away for further processing while the waste was piled in slag heaps (Wallace 1993). Between 1890 and 1930, an estimated 28 million tonnes of ore was smelted using this approach. This method of roasting ore created significant sulphur pollution leaving the landscape devoid of vegetation and blackened. After 1930, ore was smelted mechanically indoors (for more information on different processing techniques used in Sudbury see Sara Group 2008). In 1972, then-Inco completed construction on the 'Superstack', which would disperse sulphur emissions through one of the largest freestanding stacks in the world. Major mining companies in the region also reduced their daily sulphur emissions to fall in line with new provincial air pollution legislation (Buse 1993).

Since the 1980s, Sudbury has diversified its economy and re-greened the landscape through a number of local and government-led initiatives. The City is home to one university, two colleges, a medical school, and a school of architecture. It also serves as a regional service centre for healthcare, government, and retail. The mining companies now employ between 5,700 and 6,000 people (including Vale, Sudbury Integrated Nickel Operations, First Nickel and KGHM International) while the mining supply and services sector includes over 300 companies employing almost 14,000 people (GSDC 2013; Vale 2014a; Sudbury Integrated Nickel Operation 2014). Since 1978 over 9 million trees have been planted in Greater Sudbury through its land reclamation program to transform the blackened industrial landscape. These efforts, by concerned citizens, university and industry representatives, have resulted in an innovative industrial land reclamation

technique and several distinctions including a United Nations commendation (Hall and Donald 2009).

In 2005, the Ontario government passed a new environmental regulation to reduce air toxins. As a result, Vale started planning the Atmospheric Emissions Reduction (AER) project (also known as the Clean AER project) to meet this new regulation. The company describes the Clean AER project as "the largest single environmental investment in Greater Sudbury's history" (Vale 2014b: 2). The Clean AER project will reduce sulphur dioxide levels in Sudbury by 85 percent from current levels (Vale 2014b). Initially, Clean AER was a $2 billion project that would require roughly 1,300 workers during peak construction (Ulrichsen 2012). Work on the project started in June 2012, however by January 2013 Vale announced it was scaling back the cost of the project to $1 billion. The company would also be moving to a single-furnace from a two-furnace operation. They cited volatile market conditions, high operating costs, and the new processing facility in Long Harbour as reasons for these changes (Mulligan 2013). However, the project will still require an estimated 600 to 800 workers (Key Informant).

A Brief History of Long Harbour-Mount Arlington Heights NL

Long Harbour-Mount Arlington Heights is located in the Placentia Bay region, approximately 110kms from St. John's or roughly a 1.5hour drive (see Figure 3). The community was first settled between 1810 and 1812 and the early economy was dependent on the cod fishery (Legge 1983). During World War II, an American naval base was constructed in nearby Argentia and a large number of people from Long Harbour were employed in both its initial construction and then subsequently as support personnel. The naval base introduced significant labour mobility in the region. Estimates place 10,000 to 15,000 Newfoundlanders working on the base during its construction. At the height of its operation in World War II, more than 12,000 American military personnel were stationed at the base. Military activity declined during the 1970s and 1980s until the base was decommissioned in 1994 (Higgins 2006).

Figure 3: Location of Long Harbour

Source: AGWREDI 2008

During the mid-1960s, the Electric Reduction Company of Canada Industries Limited (ERCO) selected Long Harbour as their new site to

develop a phosphorous plant. The company was attracted to the location between North American and European shipping lanes, the ice-free port and cheap hydroelectric power. The construction phase started in 1966 and was completed in 1968, employing roughly 1,300 people at its peak. During operations, the company was required by government policy to employ Newfoundlanders for 90 percent of the workforce (Martin 2006). According to Legge (1983), the plant employed approximately 400 people directly during operations, 92 percent of which were from Newfoundland and 80 percent of those were from Long Harbour, Dunnville and Norman's Cove. However, by the mid-1980s employment started to decline through layoffs. In 1989, ERCO announced it was closing the phosphorous plant. This resulted in the loss of 290 jobs and roughly $4million a year in economic contributions (Martin 2006). At its peak, the population of Long Harbour grew close to 700 people (Legge 1983).

In 2006, the former ERCO site in Long Harbour was selected as the location for the commercial nickel-processing facility as part of the Voisey's Bay Development Agreement between the provincial government and Vale NL (then Voisey's Bay Nickel Company) (VBNC 2006). Under the Newfoundland and Labrador *Mineral Act*, any person holding a mining lease is required to complete primary production (in whole or in part) within the province (RSNL 2014). The former US navel base at Argentia was initially selected as the location for a demonstration plant and subsequent processing facility (Voisey's Bay Development Agreement 2002). The demonstration plant was part of a research and development program outlined in the development agreement to test out a new processing approach called hydrametallurgy. During its operation from 2005 to 2008, 150 people were employed at the Argentia demonstration plant and most were from the local area (Lysenko 2011). When the plant was shut down, many employees were offered positions at Vale operations in Sudbury, Thompson MB, New Caledonia, Mississauga ON and St. John's (Bell 2008). According to company documents, 70 percent of workers stayed with Vale and "every employee at the plant was given a formal offer of employment at the commercial plant, when it opens" (Vale 2008a). However, it is unknown if workers previously employed at the demonstration plant are working at the new processing facility.

As a result of the hydrametallurgy processing technique, which produces a different type of residue that requires underwater storage, the location for the commercial nickel-processing facility was moved from Argentia to Long Harbour (VBNC 2006; VBNC 2007a). Phase I construction started in April 2009 and ramped up in 2010. By October 2011 the project was employing nearly 2,000 workers on-site and another 120 in St. John's (CBC 2011). The company also expressed concerns over a labour shortage for trades and professional positions, not only within the local labour market but also across the country (Vale 2012a). A 1000-room camp complex was built for workers, indicating the importance of mobile workers for the construction labour force (Vale 2012a). By the end of 2012, there were over 4,500 people working at the site and close to 800 people staying at the camp (Vale 2012b). According to the company, the project encountered labour shortages in 2012 and 2013 and engaged the temporary foreign worker program as well as travel cards[2] to fill

[2] When local unions are unable to find sufficient skilled people locally, travel cards can be used to make opportunities available to their sister union locals across the country (Vale 2012b).

vacancies (Vale 2012b; Fitzpatrick 2013a; 2013b). The company cited absenteeism and high turnover with workers leaving for other construction work as factors contributing to this labour shortage (Fitzpatrick 2013a; 2013b).

The use of temporary foreign workers in Long Harbour, however, was not without controversy. In 2012 crane operators (who were later joined by other workers) staged a wildcat strike reportedly due to the use of temporary foreign workers, lower wages compared to Alberta, and concerns over the living out allowance (Gulf News 2012; CBC 2012; Labour Relations Agency 2013). In 2013, temporary foreign workers from Ireland were hired by a contractor on the project and then sent home after only three weeks. This was reportedly due, in part, to a new incentive program for all workers at the site that offered a $2-10 per hour raise that drew in more Canadian workers (Fitzpatrick 2013b).

In early 2013, amendments were made to the development agreement due to delays in construction at the Long Harbour processing facility. Vale was provided with additional exemptions from primary processing requirements between 2013 and 2015 until the facility in Long Harbour is completed. In return, the provincial government negotiated enhanced industrial and employment benefits and $100 million over three years in additional revenue (Executive Council 2013). Phase I, which included constructing all of the buildings and systems, was completed by November 2013 and reached an estimated 6,000 workers at its peak. Phase II will include start-up at the plant, finishing the port and developing the internal systems needed for processing concentrate from Voisey's Bay (Fitzpatrick 2013c). During the operations phase the plant is expected to provide 450-500 full-time jobs, the vast majority of which are to be hired from the provincial labour force. Additional opportunities are expected in the supply and services sector (Vale 2008a; Lysenko 2011).

NATURE & EXTENT OF LABOUR MOBILITY

One of the major objectives of this research is to identify the nature and the extent of labour mobility in the nickel-processing sector. This includes daily commuting of more than 2 hours to more extended absences and journeys lasting weeks, months or even years. Labour mobility is not a new phenomenon in Long Harbour or Sudbury. With an economic history tied to the fisheries, there is a long tradition in Newfoundland and Labrador of people 'gone away' to work (Storey 2010b). Both Storey (2010b) and Walsh (2012) highlight the history of people from the province working away, for example in construction in Boston and New York during the 19th century as well as in mining and forestry camps across the island. This was emphasized by one key informant who stated:

> *Labour mobility is not a phenomenon that just started with the onset of oil and gas or the closure of the fishery or that sort of thing. My grandfather worked in Greenland, he worked for the Americans. So that's always happened, it's always been an aspect of the culture…* (Director of Policy).

Other research has highlighted the strong 'commitment to place' that exists in Newfoundland and Labrador (Greenwood et al. 2011) or according to one key informant "*an intangible connection to the province*" (Director of Policy), which might influence whether people choose to relocate or commute.

In Sudbury, on the other hand, key informants were quick to point out that labour mobility is not really a concern. As one key informant stated: "*It's not like the oil sands okay? These people that work in the nickel industry here in Sudbury, they live in Sudbury. Buy homes, so you don't have those challenges that you do in those communities where people are leaving here and going some place else to work*" (Business Development Officer). While another explained some of the reasons why:

> *So long established community, as you know, has great infrastructure, education, medical referral centre, and even a retail referral centre for Northeastern Ontario. So we have a lot of infrastructure here* […] *this is not a mining camp. This is not a fly-in/fly-out, where you have to develop everything for your employees* (HR Professional – Mining Industry).

Several key informants discussed a period of transience in the mining industry during the 1960s mineral boom. For example,

> *The last time we really had a big attempt to bring in workers where we didn't have enough was back in the late 60s and the old Inco was expanding their nickel production, they were bringing a lot of their workers up from the east coast and we had trailer parks. But since then we don't have that anymore. So workers who are coming in here for permanent jobs are buying homes and staying in the community* (Business Development Officer).

Historically, miners and their families often relocated and lived in company towns or towns adjacent to the mines versus long-distance commuting (Houghton 1993). For example my grandfather was a 'tramp miner', a phrase used to describe a miner who worked on contract versus for a specific company. During the 1940s, 1950s and 1960s, my grandfather and his family moved from one mining community to another including Manitouwadge, Bancroft, Sudbury, and Kirkland Lake.

In Long Harbour, the construction phase of the processing facility brought significant mobility to the region across the E-RGM spectrum. As noted earlier, this included daily commuters, workers from other parts of the province, workers from across the country, and temporary foreign workers. The official recruitment campaign for the operations phase at Long Harbour started in 2011. By September 2013, the company had hired 246 people including support groups. The company divides their employment figures into two levels of geography – Long Harbour and 50kilometers. As seen in Table 2, 8 people were from Long Harbour and 52 were from within 50kilometres. For the processing plant technician positions, the company had received over 4,200 applicants and hired 175 people – 4 from Long Harbour and 34 from within 50kilometres. Based on these numbers, 75 percent of employees reside outside the 50kilometres radius. Anecdotally, we know a number of these workers are commuting from St. John's (information provided by a key informant).

Table 2: Long Harbour Operations

	Total	**50 km**	**Long Harbour**
Total, including support groups	246	52	8
Total Direct Operations Employees	230	46	6
Processing Plant Technicians	175	34	4

*Information based on September 2013 figures provided by a key informant

In Sudbury, the construction phase of the Clean AER project originally anticipated needing workers from beyond the local labour market. However with the downscaling of the project, most of the labour needs have so far been filled locally (Key Informant). In terms of nickel processing, according to one key informant, there are roughly 1,634 people employed in direct processing as well as support services between staff, production and maintenance workers with 161 people (9.9 percent) commuting more than two-hours to and from work daily (HR Professional – Mining Industry). Anecdotally, key informants did speak about friends and colleagues in teaching, healthcare, and mining who do commute from smaller communities (e.g. Manitoulin Island, Espanola, and Elliot Lake) to work in Sudbury. They also mentioned a diamond cutting facility in the community that relies on foreign workers with specialized skillsets. However, key informants explained this labour mobility was the exception rather than the norm.

FACTORS INFLUENCING LABOUR MOBILITY

We know from the literature that E-RGM is caused by a variety of factors. In Phase II of the Nickel Processing On The Move component we will be focusing on the workers specifically, to determine where workers are commuting from and the personal decisions that influence and are made as a result of E-RGM. In this research, key informants were asked to describe the factors that they thought influence labour mobility. These responses are based on their perceptions and in some instances personal experiences. These factors include: personal preferences and access to amenities, relative location, nature of the occupation, industrial history, size, scale and labour, corporate policies and government policies.

Personal preferences and access to amenities

Much of the literature on labour mobility discusses the economic reasons (e.g. money and experience) behind why people choose to commute as well as the personal preferences for a variety of amenities (Ferguson 2011; Walsh 2012; Storey 2009). In Long Harbour and Sudbury, key informants discussed a number of reasons why they thought people choose to commute versus relocating to where they work. Many perceived urban amenities like restaurants and retail as important while others discussed amenities like schools and recreational facilities for families. The lack of amenities was often cited by key informants as one of the major reasons for labour mobility in Long Harbour where people are choosing to live in St. John's. As one key informant described: "*there is no school. There are two convenience stores, that's it. Other than that there are no amenities*" (Director of Policy), while another added:

> *young people I guess want the facilities and the amenities and … they want to be able to go out to a pub and go down on George Street or wherever. Or if you're married and have kids … you want to live in a community that has a school and probably a swimming pool and those things. … if I want to send my little fellow out to do gymnastics, am I going to live in Long Harbour or Placentia or am I going to live in St. John's? So … as an adult I don't mind commuting but I don't want my child commuting, and that's what we're hearing a lot of, is that people want their children to have the facilities and the opportunities that rural Newfoundland can't give them* (Campus Administrator).

As noted earlier, in Sudbury key informants were quick to highlight educational, medical and retail amenities as possible reasons why people choose to live and work in the city. One key informant also discussed the importance of living were they grew up and cited this as a possible factor influencing labour mobility in general: "*I guess some people that's where they're from and they want to keep their roots where they are. You know, work is work and home is home, and a lot of people will move probably closer to their work because it's easier for them, but I think for the most part people like to live where they want to raise their families*" (Labour Representative). As these key informants suggest, possible reasons for labour mobility are varied but can be influenced by economics, personal preferences, age and family status.

Relative location

The role of relative location and how it influences mobility is not explicitly discussed in the E-RGM literature. Lepawsky, Hall and Donald (2014) highlight the importance and under-theorized role of relative location in their work examining talent attraction and retention in St. John's NL and Kingston ON. For example, Kingston's close proximity vis-à-vis Toronto, Ottawa and Montreal often works for and against labour mobility and economic development. People can choose to either work in Kingston but live in Toronto or vice versa. As a result, we need to understand how places are constructed in relation to other places. In Newfoundland, key informants cited Long Harbour's close proximity to other places (particularly St. Johns) and comparative lack of urban amenities as perceived factors influencing labour mobility. For example, one key informant questioned: "*And I think it's hard, like in Long Harbour when you're trying to attract people to live there. If you're only an hour and a half away people will drive it regardless of the conditions*" (Business Development Officer). Another key informant discussed how proximity could work for and against communities in Placentia Bay: "*And we find it hard to do that because we're so close to St. John's* [speaking about offering amenities]*. But then that's why people I suppose don't mind living here, anything they need right away, they can get it here and drive to St. John's every weekend anyways*" (Town Official). On the other hand, Sudbury is larger in size and comparatively farther from other major centres like Toronto and Ottawa. This might explain why key informants see labour mobility as less of a concern and less widespread.

One key informant discussed the opportunities of seeing Long Harbour in relation to a larger region that extends beyond the municipal boundaries. They explained:

> *I always say that we're in the middle and our community is in a 30kilometre range. And within 30kilometres we have a medical facility, supermarket facilities, school facilities, arena facilities and so on and so on. And so within a 20 minute drive or 15 minute drive*, [it's] *like driving across St. John's, it's still 20 minutes. It's the same 20 minutes. But it is a mind set that is hard to get there. So it takes a lot of preaching for a long period of time for them to say hang on a second now, your house can be in Long Harbour, and all your facilities for your recreation are within 20 minutes drive from your house* (Executive Director)*.*

They also discussed the challenges in thinking about place as an isolated space that stops at the boundaries of a municipality: *So once they say our town they mean our municipality, we're only responsible for what's in that little radius. No, if you put your radius bigger and say that's your community, a community of communities if you want, and then it changes, then*

you have a different perspective altogether (Executive Director). As this key informant implies, thinking about place in relation to other places offers new opportunities for community development. It also offers important insights for thinking about planning, transportation and infrastructure issues related to labour mobility. However, thinking beyond municipal boundaries in relation to other places is often the exception rather than the norm.

Nature of the occupation

As noted earlier, E-RGM can be more prevalent in some sectors like construction where workers have typically followed the work (see also Storey 2001; 2009; Markey et al. 2011). This was the case in Long Harbour where several key informants discussed the temporary nature of construction jobs and how they thought people were unlikely to relocate permanently to Long Harbour while the plant was being built. As one key informant noted: "*I guess a lot of them are established with families and that and it's probably easier for them to come in. Especially where a lot on the construction side is short term so it's easier for them to commute and they're getting their allowance to live away so it sometimes makes economical sense then too"* (Elected Official). Another key informant agreed:

> *I think it's because it's construction. Construction starts and then it ends. It might be one year, two years, or three years. And then it ends. And you're not moving your family for that amount of time. Because once this is construction is over they will go on somewhere else, it may be Bull Arm or wherever else. And I think that's it. You will not see an increase in population with construction* (Town Manager).

In Long Harbour there is, however, optimism that people will move to the community versus commute once construction is completed and the operations phase is well underway.

Size, scale & labour

The scale of the construction project in Long Harbour, compared to the size of the community also meant that the local labour market could not fill the demand for labour. This will also be the case for the operations phase in Long Harbour, which will require approximately 475 workers (Vale 2012a) in a community of 298 people or as one key informant put simply: *When you have a community of 300 people, you don't have much local labour* (Executive Director). However, Long Harbour is part of several much larger regional labour markets including the Avalon Gateway Regional Labour Market (Lysenko 2011) and the Avalon Peninsula.

During construction, the company cited labour shortages for heavy crane operators, certified journey persons, pipefitters, electricians and welders (Government Representative based on information from Community Liaison Committee; Vale 2012b). To ease this shortage they used the Temporary Foreign Worker program as well as travel cards. Under the travel cards approach, local unions notify their sister local unions across the country about job opportunities, which then become available to their membership (Vale 2012b). Several key informants also discussed how the other megaprojects in the region and Alberta compete for labour, which possibly impacted Long Harbour.

In Sudbury, the local labour market has so far met the demand on the construction phase of the Clean AER project according to one key informant. There is less competition for labour from other projects in Sudbury and a larger labour market to pull from. However, one key informant noted there could be a shortage in some trades that are in high demand across the country, like mechanical piping, in later phases of the project (Key Informant).

Industrial history

Most of the Sudbury key informants cited the long historical connection to the mining industry as an important reason why they thought labour mobility in less prevalent in the nickel processing industry. For example, one key informant discussed how the mining industry in Sudbury spans multiple generations in many families. They explained: *We've been here for over a hundred years so there's a lot of history but there's also a lot of families that continued that mining tradition right. So there's a big* [labour] *pool in this area* (Labour Representative). This also potentially highlights intergenerational recruitment into the industry. While another key informant described:

> *Permanent jobs, steady workforce. Yes, we've had lay offs, we've had strikes, we've had other things, but there are jobs here and the industry has always survived. It's been around for 100 years and it's going to be around for another 100 years. There are jobs here, that's an attraction no doubt. You don't have to move so you have a better quality of life. And the guys that do travel are the big contract miners that go, but they come back here. Because people work out of here globally around the world in the mining sector, and then they come back, they leave their families here* (Business Development Officer).

On the other hand, in Long Harbour one key informant explained how they felt too much time had passed since large industry existed in the community and, as a result, most of the working age population had either left or found employment. Thus, they saw labour mobility in the processing facility as a necessity to meet labour demands.

Corporate policies

As noted earlier, corporate decisions play a strong role in the nature and extent of E-RGM. In this research, most Newfoundland key informants discussed the influence of the "living out allowances" (LOAs) in the construction phase of the processing facility. LOAs often provide daily cash contributions for travel, meals and accommodations if a worker lives beyond a defined travel zone. The LOA in Long Harbour was reportedly $128 a day worked for travel (CNA 2014). Many key informants discussed how workers could profit from the LOA by continuing to commute or by renting short-term accommodations with fellow workers. As one key informant explained:

> *So what happens is that four guys rent a house and if you're getting 100 bucks a day for living out allowance and you're spending fifty bucks a day to rent a house, between four guys and you all have a bedroom, fifty bucks in your jeans pocket every day thank you very much* (Executive Director).

As these examples illustrate, the LOA combined with the temporary nature of the construction industry can dissuade workers from permanently relocating. Plus, the extra money gained through the LOA can provide a powerful incentive for commuting. The LOA is not being provided to the operators at the nickel processing facility.

Another possible influence is the company hiring process for operators. All key informants understood that the local labour market in Long Harbour is too small to fill the demand for labour. However, many raised concerns about how the company's hiring process is perceived to be screening out local workers. According to key informants, the company is using a high performance work system that assesses behaviours, which includes computer based aptitude testing, an interview, and a group assessment. Several key informants noted how this is leading to frustration in the community. For example, one key informant explained:

> *However people in the community* […] *are expressing a lot of frustration and feeling that they have the right skills and interest to want to be committed to the company, to be committed to live in the area, to help develop the company and grow. However, they're not as comfortable with maybe some of the technology pieces that might be part of the recruiting process and therefore being screened out at a fairly early level. And* [there's] *a lot of frustration because it's been something that locally people* […] *have been hoping that they would be given opportunities to work locally in the area. And lets face it, it would be good jobs as well* (Government Representative).

Another key informant also felt that the local workforce is older and less familiar with computers and aptitude testing and, as a result, they can find the hiring process intimidating. They also believed that this approach has a higher tendency to hire younger workers with value placed on the capability to learn and be trained versus the capability to perform a particular set of skills. According to company officials this hiring process will create a different workplace model, where "all frontline workers – the people on the plant floor – will be expected to work beyond the traditional areas of specialization and move into more general, broadly defined roles with a much more diverse skills set" (Vale 2012b: 10). There was a general perception from key informants that Long Harbour residents will end up working for the contractors that will support the operations versus working for Vale.

In terms of recruitment strategies for the operations phase, the company held employment information sessions in Long Harbour and across the province, they looked internally within Vale, and they invested in scholarships aimed at several trades and technology programs at CNA as well as the processing engineering program at MUN (Vale 2012a). According to one key informant, the process operator program at CNA was initially started as a contract training initiative to train workers for the demonstration plant in Argentia. The program took in roughly twenty students and all went on to work for then-Inco at the plant. The provincial government, in consultation with then-Inco and several other companies in the province, then developed a longer-term program. While the general perception is that the current program is still designed to train operators for nickel processing, key informants were quick to point out that this is not the case. The program is designed to train process operators in a variety of industries.

In Sudbury, key informants did not discuss corporate policies as a factor influencing labour mobility. As noted earlier, there is an intergenerational labour pool to draw from and a much longer industrial history between the company (and its predecessor) and the community. The processing facility does not use the high performance work system hiring process and according to one key informant the company has strong linkages with

postsecondary institutions through co-op placements and apprentices. They further argued that the company is "very strongly engaged with community colleges for trades recruitment and trades development" (HR Professional – Mining Industry).

Government Policies

Government policies can both encourage and discourage labour mobility. For example, in 2009 the federal government revised the Labour Mobility Chapter in Canada's Agreement on Internal Trade to eliminate certification issues when workers cross provincial boundaries (Knox 2010). In 2013, the federal government also introduced changes to the Employment Insurance program requiring some workers to look for work within a 1hour commute (Services Canada 2014). We also know from recent media attention about the rise and prevalence of the temporary foreign worker program in Canada (Curry 2014). All of these policies and programs support labour mobility from daily commutes to more extended journeys. However, there are also a number of government policies in the resource industries that can require companies to hire locally including Impact Benefit Agreements and other development agreements. These agreements are typically negotiated between senior levels of government and companies as well as between companies and Aboriginal communities to secure more direct benefits from resource developments. There is little publicly available information in the Voisey's Bay Development Agreement between Vale and the Government of NL regarding local employment and the processing facility in Long Harbour. The agreement does, however, ensure that people from the province are given first consideration for employment opportunities (Voisey's Bay Development Agreement 2002; Voisey's Bay Development Agreement 2009; Voisey's Bay Development Agreement 2013). In Sudbury, there are no similar development agreements in place that include the processing facility, most likely due to the age of the mining industry. These types of arrangements are relatively new and are typically negotiated before operations commence.[3]

IMPACTS & RESPONSES TO LABOUR MOBILITY ON HOST & SOURCE COMMUNITIES

As noted earlier, E-RGM has a number of implications for both source and host communities. On the one hand, host communities face increased demands on infrastructure, businesses, services, and housing by temporary or transient workers. This can, in turn, increase the cost of living for the people who live in these communities (Markey et al. 2011). Source communities can also face increased development and demands on infrastructure, services and housing. While other challenges include impacts on social and civic life as potential volunteers and municipal councillors are too busy to participate because of their commuting (Storey 2010a; MacDonald et al. 2012; Walsh 2012; Ryser and Halseth 2014). On the other hand, source and host communities can also experience economic spinoffs, increased development, and other benefits.

[3] In early 2014, Vale opened Totten Mine in Sudbury and an impact benefit agreement was signed between the company and the Sagamok Anishnawbek First Nation. The mine is located on traditional lands and the agreement provides employment opportunities and a share of the economic benefits. According to company officials "this agreement was the first of its kind for the company in the Sudbury area" (Migneault 2014).

In this research, key informants highlighted this complexity and noted a number of challenges and opportunities related to housing, traffic and infrastructure, local economic development, community development, corporate-community relations, and corporate operations and productivity. There are number of key actors responding to these impacts including the local municipalities, the Long Harbour Development Corporation (LHDC)[4], the Placentia Area Development Association[5], the company and contractors, local police forces, and provincial government regional staff. For the most part, these impacts and responses are focused on the host communities of Long Harbour and Placentia due to the limited concern over labour mobility in Sudbury. In some instances, key informants also spoke generally about source communities in Newfoundland and labour mobility between Newfoundland and Alberta.

Housing

A number of housing concerns were raised during the key informant interviews in the Placentia Bay region, especially relating to availability and affordability. At the heart of this issue are several megaprojects that are occurring simultaneously in the wider region, which is driving up demand for housing. As one key informant explained: "*I used to describe it as every bed and every pillow was in demand and whether it was a B&B or whether it was a hotel or whether it was someone renting a home or whatever, every bed and every pillow was in demand and still is*" (Business Manager). Anticipating this demand in Long Harbour, a 1000-room camp was built onsite for workers while CGI developed a mini-home subdivision for workers and a lodge was also built to house construction managers. Trailers were also noticed on highway 202 leading into Long Harbour and in backyards throughout town, which some key informants noted were used for housing construction workers. Other people described how cabins were even being rented out to workers. For example, one key informant explained:

> *Well there's an on site camp. A lot of people here and of course the surrounding areas took in boarders, so that's big. Rental properties, very difficult to find a place to stay right now. There's even some trailers, travel trailers that are being used to house, especially in the summer months. And some people are even going into the winter months in the trailers. And you'll see the trailers in the back of people's property that is connected to their systems and they're using that for housing* (Town Manager).

One key informant also noted that workers from out of province typically gravitated towards accommodations in the camp because it was simple. The Long Harbour Development Corporation (LHDC) and the municipality were key partners in trying to ease the demand for housing. For example, the town office would provide lists of people who were taking in boarders as well as rental properties while the LHDC secured and sold the land for the mini-home subdivision and lodge.

[4] The LHDC was established in 1991 as an economic development corporation for the Town of Long Harbour-Mount Arlington Heights. It includes a five-member board of directors and an executive director (Long Harbour Development Corporation 2014).

[5] The Placentia Area Development Association was incorporated in 1972 and is a non-profit rural development organization focused on social and economic development in the Placentia region (National Geographic Society 2012)

Another related impact of labour mobility was an increase in housing and rental prices. Key informants noted that the high LOAs were driving up the costs of rental properties and in turn creating a crisis for affordable housing. One key informant noted: *At their last meeting* [the rural municipalities committee] *it was brought up about affordable housing because it's certainly becoming a demand in places. Especially here now because people are getting $1,400, $1,500, $2,000 a month for an apartment, and a few years ago you would get one for $400 or $500 a month* (Town Official). While another key informant described how some people not associated with the project "*have been given notice that they have to leave their house or pay what they could get from workers who are working at the site*" (Government Representative). Related to this growth and development, one key informant explained how property assessments in Long Harbour-Mount Ellington Heights went up 90 percent. To counteract these challenges, the town stabilized taxes while the Placentia Area Development Association is studying the affordable housing issue in the region.

Key informants also noted how some in Long Harbour and the surrounding region are profiting from the increased housing demand. As one key informant explained:

> *that's been an absolute boom for a lot of people in the town, because there's a lot of older people in the town, a lot of widows in the town, and every room available in the town was rented and rented for a period of time. A little bit lesser now but will probably come back up again, because construction is beginning to get into the next phase, it's going to come back up again…So that helped out a lot of people in this town that their rooms was rented. In fact probably anything within 40 kilometres of the area that was available to be rented was rented* (Executive Director).

They also viewed this as a positive ripple effect through the local economy. Other key informants discussed how people were building houses with the sole purpose of renting them out to workers in the region.

In Sudbury, housing was initially a concern with the original scale of the Clean AER project. In 2012, Vale submitted a rezoning application to house temporary workers at mines and industrial sites, including the nickel refinery and smelter in Copper Cliff. A Vale spokesperson explained the reasons behind this application:

> Given the many projects underway at our operations, combined with all of the other activity happening in the (Sudbury) Basin, there is a risk there will not be enough capacity in the community to adequately house the number of temporary workers that will be required for our projects -- and we're trying to put plans in place to mitigate that risk if we need to. This is especially true considering we have one of the lowest vacancy rates in the country (Perth 2012).

Labour organizations in the City were vehemently opposed to this request and viewed it as preparation to house workers during future labour disputes (Sudbury Star 2012; Sudbury & District Labour Council 2012). The United Steelworkers also argued that: "segregating temporary workers on industrial sites would not only present health and safety issues, it would isolate these workers and reduce the economic impact they would provide if they had appropriate housing in the community" (Sudbury Star 2012). In early 2013, after the decision was made to scale back the Clean AER project, the rezoning application was withdrawn.

Traffic & infrastructure

Traffic concerns are a significant issue related to labour mobility as people move in and out of communities during their daily commutes. Key informants described the 'train of F150s' leaving every morning from St. John's and going out to Long Harbour and other megaprojects in the region. Several people also provided traffic tips about when to travel to and from the region, as one key informant noted: *If you can get clear of the Argentia access road before 5 o'clock, it would be advisable* (Elected Official). The biggest challenges cited were the volume of traffic, speeding, and the increased pressure this volume places on municipal infrastructure. For example, Vale estimated that 482 vehicles a day would be moving on and off the site during peak construction with 100 to 150 vehicles moving on and off the site daily during operations (VBNC 2007b). While these estimates are likely conservative, they still represent a huge increase in volume for a small, rural community. In Long Harbour, the community placed an electronic sign leading into town reminding people to slow down. Town officials also had several meetings with the RCMP, Fluor, and Vale to increase police presence on highway 202 and discuss the issue with workers. Likewise in Sudbury, company officials met with the city and Greater Sudbury police to discuss and manage traffic logistics related to the Clean AER construction (Key Informant).

Another key informant discussed how the volume of traffic places increased pressure on the pavement and the infrastructure that's underneath. Key informants were also quick to point out a disconnect between municipal costs related to labour mobility and megaprojects and the revenues they receive to pay for these increased pressures on infrastructure and services. As one key informant noted:

> *It's funny, because everybody says you must have loads of money because you have lots of development happening down there. No, they've gotten almost no extra money. They've got grants in lieu of taxes kind of stuff but that municipality gets its money from property tax. You don't get property tax unless people are living in houses owning property and that's slow to happen. Every morning there's a train of F150s going down there, those people don't own houses down there. So there's a disconnect between the value of the development, the cost of the infrastructure to support that development and the institution, the municipal government that's supposed to pay for that infrastructure. Their revenues have not gone up the way everybody thinks they have. So they're going to the provincial government looking for more and more money* (CEO).

These "drive-through" impacts in Long Harbour and Placentia are similar to the "fly-through" effects described by Storey (2010a; 2014), which take into account the added costs on communities of having commute workers use services and infrastructure with little to no compensation or benefits. As noted earlier, a similar issue occurred in the Peace River Regional District in British Columbia, which led to the Fair Share Agreement.

Local economic development

Key informants also discussed a range of economic spinoffs for businesses. In addition to people spending their LOAs at local B&Bs, hotels and restaurants, some businesses have expanded their operations to accommodate the influx of mobile workers. For example, one key informant discussed how "*the supermarkets* [in the region] *have extended their hours so they're open and available to the workers*" (Government Representative). Others discussed a

number of new business start-ups including the Tim Horton's in Placentia and the new restaurants and gas station along the Trans Canada Highway before the turnoff to Placentia and Long Harbour. All attributed this new business activity to the economic benefits of the megaprojects and mobile workers. Another key informant mentioned the economic spinoffs for the 'toys industries':

> *I think too for the people who are local who are able to commute directly to the site, the wages have been better then what people have been used too and there's been a big impact on what I'll call the toys industries, you know your ATVs and your campers and the hip trucks. Almost everybody has a truck* (Government Representative).

However, one key informant felt that this economic impact is far less for mobile workers than someone who lives and works fulltime in a community:

> *The economic development thing is the big one. They perceive that while a guy working in Alberta brings money home and his family is there, or even if his family isn't there he still has a house there. He pays his property tax and comes home every now and then and spends money. That's not the same contribution as someone who lives and works full time in the community or near the community, there's a different quality of input…. And it's probably not as big of a financial input as somebody there all the time. It clearly isn't because they're gone half the year, they're buying groceries somewhere else, they're buying clothes somewhere else* (CEO).

Labour mobility can also impact other sectors in the local or regional economy like the tourism industry. For example, I had to commute to and from the region each day during the interview process because there were no hotel or B&B rooms available to stay in. This was largely attributed to mobile workers staying in these types of accommodations long-term. Several local businesses at the Harris Centre Regional Workshop for the Southwest Avalon also discussed the competition for labour between the service industry and megaprojects in NL and elsewhere. As these examples illustrate, there are a number of potential economic spinoffs that can be captured from mobile workers as well as challenges. However, benefits may be short term and the quality of investment might be less than what people would contribute if they lived and worked full-time in the community.

Community development

While the previous sections have focused on the impacts on host communities in Placentia Bay, a number of key informants also discussed impacts of labour mobility on community development in source communities in Newfoundland. As noted earlier, the literature on E-RGM identifies a number of impacts on community, social and civic life (Storey 2010a; MacDonald et al. 2012; Walsh 2012; Ryser and Halseth 2014). Likewise, key informants in Newfoundland discussed challenges with securing volunteers for local fire departments, coaching, and municipal council because people are too busy or not in the community due to their mobile lives. One key informant in Sudbury discussed hearing about the social planning challenges related to labour mobility at a conference in Newfoundland. They explained:

> *there's also a social planning thing … with the loss of a whole demographic that no longer exists in the community. You can't rely on, you can't join a club because you'd miss every third meeting and all those kinds of things. They don't coach the kid's*

hockey team, they don't see the kid's Christmas concerts, all that kind of thing (Community and Strategic Planning).

It is also worth quoting at length one key informant who described the impacts of labour mobility on source communities in rural Newfoundland:

what I'm perceiving is people are saying we feel like a camp, we feel temporary, because all these working people yeah they're working, they've got good jobs, they're making really good money, they're buying big trucks, they're buying all kinds of toys, they're fixing up their house, but you can see tumbleweeds blowing down the road sort of thing, right? There's nothing outside of the financial transactions that are happening in the background, mortgages are being paid, property taxes are being paid, that sort of thing. There's no big investment in the community because they're hardly ever there. Well they're probably there more than they're gone. But when they come home, their mind is not on engaging in the community, going out and buying a bunch of stuff. Their mind is on just relaxing and having a good time, so there's a sense that there's probably still a financial connection there, but the development opportunities from that are pretty limited, right? These are not people who are coming home to invest in their town. They're putting money in the bank, buying a better skidoo, buying a better truck, whatever (CEO).

They further described the situation as foreboding and a house of cards because: "*We don't know how this is going to turn out, we don't know how this is going to end, because they're gone so much that when they come home they're off on the skidoo, they're off on the quad, they're out in the woods, they're out to their cabin, or whatever they're not coming home to run for council, or sit on the infrastructure committee, or whatever they're coming home to disengage and just enjoy their life*" (CEO). These source community impacts and perceived lack of investment requires significantly more policy and research attention.

Corporate-Community Relations

One key informant discussed, in general, the potential impacts of not having a large local labour force on corporate-community relations. It's worth quoting their argument at length:

there's a big difference between the company and the fucking company […] *if there's no buy in from the community then the company will always be an adversarial company. The only buy in you're going to get is if you have a sense of ownership. That's my employer, that's where I earn my living, that's where I look after my family. So therefore now they have the interest in the company. And if there's nobody working there then they will have less interest in the company. Some people don't care about the company, and now it's an inconvenience to them…*

This idea of local employment creating community buy-in and a sense ownership is an interesting perspective. Especially if local workers are being screened out of employment opportunities, real or perceived. This has the potential to create tension between the company and the community over other issues like noise, the environment, and infrastructure for example. Labour mobility also raises interesting questions about corporate investment in communities. Do companies invest locally in the host community or do they invest where their workers actually live? Perhaps they don't invest in any 'place' but instead take a more neoliberal approach and invest in individual workers.

Company operations & productivity

The impacts that weather can have on labour mobility and the possible implications for the processing facility in Long Harbour was also discussed by one key informant who explained,

> *The more they live here the more secure the plant is because if you look at the history of the thing, there was times the ERCO plant over there had to shut down because of the weather, nobody could get there. The ones who got there were the residents of Long Harbour. If they're not living in Long Harbour that plant will shut down* (Executive Director).

For nearly an entire week during our July interviews, Long Harbour and Placentia were blanketed with fog and under a special weather warning. As this key informant notes, if people continue to commute from St. John's and elsewhere, operations and productivity might be impacted if severe weather prevents people from getting to the facility. This raises questions about the costs for local workers who might have to shoulder the absences of workers who live away. Labour mobility, in general, also raises important questions about worker safety on their commute to and from work.

Impacts on workers

While this phase of the research did not look specifically at the impacts on workers and their families, a number of key informants raised several possible concerns. For example, in Sudbury one person stated: *You can tell the ones going back* [to Alberta], *they sort of have this dead look in their eyes, they're just like, I don't want to go back. I could pick them out at the airport. I've been out West a number of times and you can see them in the Calgary airports, you know whose going where* (Community and Strategic Planning). While another key informant in Long Harbour discussed how they felt the 12hour shift combined with a commute will take its toll on workers, especially with young families:

> *If you're a younger mother and you've got children or you're a younger father and you've got children and you're working a 12 hour shift and then you've got to add 2.5 hours onto your day, so that's a 14.5 hour day every day, all of sudden that's not so attractive anymore. And your not getting no living out allowance, you're not getting any gas allowance, it's costing you 800 a month in gas to drive back and forth over the highway in all weather conditions and you have to be at work at 7 in the morning. And then your child is up all night and you have one eye on the road and one eye, you know. And all of a sudden your child is sick and you have to get back and you can't get there and so on* (Executive Director).

They speculated that over the next 5 to 10 years people working in processing will get sick of the commute and either move to Long Harbour or other nearby communities. Another possibility is, people will quit and look for work closer to home. In Long Harbour, the town is investing in infrastructure, recreation and beautification projects while the LHDC is securing land for business development and residential development in preparation for those workers and business who might choose to relocate to Long Harbour.

SMALL TOWNS, BIG INDUSTRY: DEALING WITH THE IMPACTS OF MEGAPROJECTS

Much of the discussion in the Placentia Bay region focussed on the impacts of mega-projects in rural communities. While there is certainly hope and optimism that these projects will bring new opportunities to these communities, there is also fear over the

impacts and uncertainty on how to capture and secure long-term local benefits. On the one hand, megaproject communities are experiencing new opportunities for local employment, local procurement and business development, increased growth and development as well as corporate investment. As one key informant stated: *a big project is beneficial because it has big numbers and it impacts a lot more people. And so it provides a more dramatic impact, and it has the capability of breathing new life into our community* (Town Official). In Long Harbour, the company built a new fire hall and donated a fire truck and equipment and their training centre will be donated to the town when operations begin. The town is also receiving a $5million grant in lieu of taxes over a ten year period (2008-2018) for all property owned and leased by Vale within the municipality (Vale 2008b; 2011).

However, big projects also bring big impacts and often small communities have less capacity to mitigate the intense development pressures they're facing. As one key informant explained: "*And I sound like a broken record I know, but they don't have the capacity, I mean St. John's barely has the capacity to keep up with the development that happens here, and they have 1,200 employees."* They continued, "*To hear them* [some small towns] *talk about it, they got run over. Everything is out of control. It's all great like they talk about it like it's a wonderful thing, but they've got no control over what's happening down there, it's just going mad*". However, they also explained how the systems and structures we have in place are rigid and not designed to deal with these economic shocks: "*it's not the individuals, it's not like they were neglectful or anything like that, but the system we use and the structure that uses it, is just not designed to manage that, to deal with that kind of economic shock up or down"* (CEO). That being said, community officials are trying to create new institutions and approaches to deal with these impacts and capture more local benefits.

For example, as seen in Table 3, the Long Harbour Development Corporation (LHDC) has been proactive in trying to secure economic spinoffs and prepare the town for future economic and population growth related to the processing facility. In addition to these activities, according to one key informant, the LHDC proactively sought out assistance to develop an instrument that would provide some practice for people going through the hiring process at the processing facility including the aptitude testing and team building exercises. However, they were unable to get specific information about the process to create a realistic model for preparing potential candidates. The LHDC also proactively commissioned a Long Harbour Resident Survey to develop a labour force profile to maximize employment opportunities with Vale and other possible employers. The survey also explored attitudes related to the megaproject development and priorities for community improvements. For example, according to the survey results, 73 percent of respondents have completed other education towards a degree, certificate or diploma. In addition, 44 people applied for a permanent job at the plant, 26 people completed the attitude/aptitude testing and five people obtained or where contacted for an interview. With regards to the megaproject, 16 percent of respondents strongly agreed and 43 percent somewhat agreed that Vale is committed to supporting the community. In terms of community improvements, 50 percent of survey respondents identified water improvements as most important for the Town Council and LHDC to focus on (Sagacity 2013).

Table 3: Long Harbour Development Corporation Initiatives

• Purchased the former Parish Hall and completed a series of renovations and upgrades to make the hall suitable for public meetings and community events
• Purchased the former school in Long Harbour and converted the property into a multi-use facility for office space and warehousing; • This property is currently fully leased
• Purchased 40 acres of land on Hwy. 202 and designated the area as the site for a future Hydromet Industrial Supply Park (HISP)
• Purchased 44 acres of land for residential development in Middle Pond. • Recruited RJG Developments Ltd. to develop the site as a fully functional residential subdivision with a mixt of housing types and commercial properties
• Purchased site-specific land along Hwy. 202 at the corner of Hwy. 101 for possible gas bar/ restaurant/convenience outlet to serve both the town and the Vale processing plant

Source: information provided by a key informant

Small Towns-Big Industry Municipal Partnership

Another initiative worth noting is the Small Towns, Big Industry Municipal partnership. While local communities are significantly impacted by these megaprojects, they are often absent from discussions regarding impact benefit and other development agreements. One key informant described the situation as looking "*at things from the 30,000-foot level but not at the community level*" (Executive Director). Two years ago the Mayors of Long Harbour and Marystown initiated discussions on how to share notes on hosting big industries. The Mayors where interested in learning from one another about how their respective communities have managed a number of issues from tax agreements and labour mobility concerns to building infrastructure. In March 2014, the Small Towns-Big Industry (STBI) partnership was created when the Mayors, town managers, and economic development officers from Long Harbour, Marystown, Placentia, Sunnyside, Come by Chance and Arnold's Cove all met in Long Harbour. Their current mandate is to share data, information and best practices on capturing local benefits and managing impacts. The partnership has met twice and it represents a unique, locally driven response to dealing with the impacts of megaprojects in the absence of provincial assistance. It also has the potential to grow into a larger voice, advocating on behalf of small towns for more local benefits and control over decision-making in the megaproject development process.

Strengthening Relationships between Small Towns and Big Industry

A number of key informants discussed a desire to have more formal structures and processes in place that define how a community and company can better advance communications and enhance a long-term relationship. During the demonstration plant and construction of the processing facility, a community liaison committee was established as a requirement mandated by the Minister of Environment (VBNC 2003). In Long Harbour, the committee was made up of company representatives, municipal (e.g. Long Harbour, Fox Harbour, and Placentia) and community organizations representatives from the

surrounding region (e.g. Argentia Management Authority, Long Harbour Development Corporation, Placentia Area Chamber of Commerce), and various federal and provincial government departments (e.g. Department of Fisheries and Oceans, Department of Natural Resources, Department of Advanced Education and Skills, and Department of Innovation, Business and Rural Development). The original intent of the committee was to promote communication between the company, residents, and all levels of government as well as address local concerns. Typically the community liaison committee meetings included:

- a presentation on the progress of the project;
- an update on recruiting efforts;
- a discussion on labour shortages and plans for findings workers;
- an environmental update;
- a discussion about contracts that have been awarded and the contracts the company are waiting to award;
- site tours; and
- time to answer questions.

Some key informants found the community liaison committee meetings beneficial for updates on the progress of the construction, hiring, and procurement, especially in the beginning. However, a number of key informants discussed how the quality of meetings and the number of meetings had declined recently. One key informant described them as, "*a waste of time because they come in and they talk about what they're doing, but there's no input from the committee*". While another key informant when asked if the meetings were a one-way or two-way conversation explained: "*It can be two ways but that's not the way it's working. It's basically a one-way … it's information sharing in the sense that they pass out information."* In terms of improvements, key informants suggested a better forum where they can ask questions and work through issues together. They also wanted more control by local stakeholders to set the agenda versus the company doing so. As one key informant simply argued if: "*you change the agenda, you change the meeting*."

There are several types of formal and informal approaches that can be used to create long-term relationships between big industry and small communities. Often these are negotiated in the early stages of planning and development, while others can develop in response to particular impacts. Many of these approaches are more prevalent between Aboriginal communities and industry (Markey et al. 2010). For example, exploration agreements, cooperation agreements, memorandums of understand, impact and benefit agreements, participation agreements, socioeconomic agreements, and surface lease agreements (NR Canada 2013). One approach that is more common in the United States, especially with the defence industry, is a Good Neighbour Agreement (GNA). Cooper (2013: 15) describes GNAs as:

- A **non-contractual** agreement between interested stakeholders
- A show of **good faith**
- A useful tool when trying to **manage impacts** from a business, especially benefit-related impacts
- Part of an **ongoing relationship** between a business and other stakeholders

He also provides the following common elements usually contained in a GNA: community access to information, right to inspect the facility, accident preparation, environmental

performance, good jobs and local jobs, local economic needs, transportation of waste, and changing operating conditions. One example of a GNA is between the citizens of Stillwater and Sweet Grass counties and the Stillwater Mining Company in Montana. This GNA was signed in 2000 and it provides a legally binding contract that establishes a process for citizens and company representatives to meet regularly and address any issues that might arise (Northern Plains 2014). The provincial government in Newfoundland and Labrador should consider making GNAs, or something similar, a requirement for megaprojects to counteract the lack of local input in the development agreement process and to promote long-term relationships between communities and companies.

CONCLUSIONS & NEXT STEPS

The first objective of this research was to explore the nature and extent of employment-related geographical mobility (E-RGM) in the nickel-processing sector. In Long Harbour, the construction phase of the processing facility brought significant mobility to the region across the E-RGM spectrum from daily commuters to temporary foreign workers. Thus far, a large number of direct operations employees are also commuting from distances greater than 50kilometres (e.g. from St. John's). However, in Sudbury labour mobility is seen as less prevalent in the nickel-processing operations and local labour has so far met the demand during the construction phase of the Clean AER project. A number of factors were identified that can influence labour mobility including personal preferences and access to amenities, the location of the community in relation to other communities, the nature of the occupation, industrial history, the size of the community, scale of the project and labour supply, corporate policies and government policies. E-RGM was viewed as a necessity in Long Harbour for both the construction and operations phases due to the small supply of local labour compared to the scale of the facility. Plus, Long Harbour's close proximity to St. John's was cited as a strong incentive for people to commute daily. On the other hand, Sudbury's larger size and long history with the mining industry were seen as factors influencing people to live and work in the city.

The second objective of this research was to assess the impacts of E-RGM on these communities, while the third objective was to identify the respective responses to E-RGM by company officials, all levels of government, and other community organizations. These impacts were diverse and complex for both source and host communities. For example, labour mobility can bring increased demand for rental housing and while some benefit economically by renting rooms and properties, others lose as the supply of affordable housing declines. Labour mobility can also bring new opportunities for local economic development and business development, however community development can suffer when people are too busy or tired to participate in civic life due to their mobile lives and schedules. Increased mobility can also place new demands on local infrastructure and services that are not met through the current municipal taxation system. Mobile workers can further impact corporate operations and productivity if transportation is prevented by inclement weather. Another interesting finding is the potential impact mobile workers can have on corporate-community relations whereby local residents might feel little ownership towards a company and its operations due to a lack of local employment.

The general perception is that municipalities are largely unequipped to deal with the dynamic and multifaceted impacts of E-RGM and megaproject development. Despite this, many are trying. For example, the efforts by the Town of Long Harbour and the Long Harbour Development Corporation to encourage local business and resident development, prepare the local workforce, and improve corporate-community relations are impressive. However, more is needed to counteract the impacts these communities are facing. For example, stronger provincial-municipal relations to prevent development agreements and other discussions from happening at the "30,000 foot-level" but not at the local community level. Development agreements and other megaproject planning needs to include a much larger and diverse group of stakeholders including municipal, community, and business representatives. Provincial governments also need to be more proactive in sharing resource revenues with local communities that are impacted by megaproject development and resource development to pay for increased pressures and demands on infrastructure and services. As the Small Town-Big Industry Partnership highlights, megaproject communities are actively seeking out best practices and information. Municipal associations, like Municipalities Newfoundland and Labrador, might consider hosting megaproject roundtables or conferences to have similar discussions on a larger scale and begin a lobby effort. Finally, better formal mechanisms for long-term communications between big industry and small towns are imperative like a Good Neighbour Agreement.

As noted in the introduction, this research is part of Phase I for the Nickel Processing Component in the *On the Move: Employment-Related Geographical Mobility (E-RGM) in the Canadian Context* project (http://www.onthemovepartnership.ca). The On the Move Partnership includes more than 40 researchers from 17 disciplines and 22 universities across Canada and internationally, working with more than 30 community partners to design and carry out research, interpret results and disseminate findings. On the Move is a project of the SafetyNet Centre for Occupational Health & Safety Research at Memorial University funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), the Research Development Corporation of Newfoundland and Labrador (RDC), the Canada Foundation for Innovation (CFI), and numerous universities and partners. Phase II of the Nickel Processing Component will focus on the mobile workers to determine where workers are commuting from and the personal decisions that influence and are made as a result of E-RGM. In Phase III, we will turn our attention to the impacts on source communities and revisit Long Harbour.

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REFERENCES

Avalon Gateway Regional Development Incorporation. 2008. *Zone 18 Strategic Economic Plan 2009-2011.*

Bell, N. 2008. Vale Inco Shuts down Argentia Plant. *The Telegram*, July 02: online.

Buse, D.K. 1993. The 1970s. In C.M. Wallace and A. Thomson (Eds), *Sudbury: Rail Town to Regional Capital* (pp.242-274). Toronto: Dundurn Press Ltd.

CBC. 2006. Alberta oil boom pumps $3 M a week into Cape Breton. *CBC News*, March 7: online. Available at: http://www.cbc.ca/news/canada/alberta-oil-boom-pumps-3-m-a-week-into-cape-breton-1.629565

CBC. 2011. Nickel Company Fears worker Shortage in Nfld. *CBC News,* October 25: online. Available at: http://www.cbc.ca/news/canada/newfoundland-labrador/nickel-company-fears-worker-shortage-in-nfld-1.1110907

CBC. 2012. Wildcat strike enters 3rd day at Vale nickel plant. *CBC News*, July 13: online. Available at: http://www.cbc.ca/news/canada/newfoundland-labrador/wildcat-strike-enters-3rd-day-at-vale-nickel-plant-1.1140099

CNA. 2014. Future Bright for Sheet Metal Workers. College of the North Atlantic News Room, November 11: online. Available at: http://www.cna.nl.ca/news/News-Article.aspx?messageid=964

Cooper, T. 2013. *Benefit Agreements, Good Neighbours and Partnerships – Making Benefit Agreements Work*. Presentation to the Placentia Bay Industrial Showcase.

Cresswell, T. 2010. Towards a politics of mobility. *Environment and Planning D: Society and Space,* 28: 17-31

Cresswell, T. 2011. Mobilities I: Catching up. *Progress in Human Geography*, 35(4): 550-558.

Cressell, T. 2012. Mobilities II: Still. *Progress in Human Geography*, 36(5): 645-653.

Cresswell, T. Forthcoming. Mobilities III: Moving on. *Progress in Human Geography*

Curry, B. 2014. Everything you need to know about temporary foreign workers. *The Globe and Mail*, May 02: online.

Executive Council. 2013. *Government Secures Commitment from Vale for Underground Mine.* Natural Resources and Executive Council News Release. March 28.

Ferguson, N. 2011. From Coal Pits to Tar Sands: Labour Migration Between an

Atlantic Canadian Region and the Athabasca Oil Sands. *Just Labour: A Canadian Journal of Work and Society*, 17/18: 106-118.

Fitzpatrick, A. 2013a. Specialty welders brought in for Long Habour. *The Telegram*, August 22: online.

Fitzpatrick, A. 2013b. Irish welders sent home from Long Harbour. *The Telegram*, September 21: online.

Fitzpatrick, A. 2013c. Tradespeople meet Long Harbour timeline. *The Telegram*, November 01: online.

Greenwood, G. and C. Pike with W. Kearley. (2011). *A Commitment to Place: The Social Foundations of Innovation in Newfoundland and Labrador*. St. John's: Harris Centre, Web

GSDC. 2013. City of Greater Sudbury Mining: Canada's mighty mining metropolis. Sudbury: Canada's resourceful city. Available at: http://www.investsudbury.ca/index.php?lang=en&Itemid=224

Gulf News. 2012. Wildcat Strike at Long Harbour. *The Gulf News*, July 12: online.

Hall, H.M. 2007. *Being Realistic About Planning in No Growth Communities: Challenges, Opportunities, and Foundations for a New Agenda in the Greater Sudbury, CMA*. M.A. Thesis, School of Planning. Waterloo: University of Waterloo

Hall, H.M. and Donald, B. 2009. *Innovation and Creativity on the Periphery: Challenges and Opportunities in Northern Ontario*. Paper and policy report for the Martin Prosperity Institute and their provincial project, *Ontario in the Creative Age.*

Higgins, J. 2006. *Agentia*. Newfoundland and Labrador Heritage Website. Available at: http://www.heritage.nf.ca/law/argentia_base.html

House of Representatives Standing Committee on Regional Australia. 2013. *Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in Regional Australia.* The Parliament of the Commonwealth of Australia.

Knox, R. 2010. *Who Can Work Where: Reducing Barriers to Labour Mobility in Canada*. C.D. Howe Institute Backgrounder, No. 131.

Labour Relations Agency. 2013. Arbitration Award Between Resource Development Trades Council of Newfoundland and Labrador and Long Harbour Employers Association Inc. Available at: http://www.gov.nl.ca/lra/arbitration_awards/index.html

Legge, W.L. 1983. *A Social Impact Assessment of the Electric Reduction Company of*

Canada's Phosphorous Plan at Long Harbour, Placentia Bay. M.A. thesis. St. John's Memorial University, Department of Sociology.

Lepawsky, J., Hall, H.M. and Donald, B. 2014. Kingston and St John's: The role of relative location in talent attraction and retention. In J.L. Grant (ed.), *Seeking Talent for Creative Cities: The Social Dynamics of Innovation* (pp.201-218). Toronto: University of Toronto Press.

Long Harbour Development Corporation. 2014. About Us – Long Harbour Development Corporation. Available at: http://longharbour.ca/LHDC.asp

Lysenko, E. 2011. *Labour Market Profile for the Avalon Gateway Region*. Report prepared for the Avalon Gateway Labour Market Development Network and Rural Secretariat – Executive Council.

MacDonald, M., Sinclair, P., and Walsh, D. 2012. Labour migration and mobility in Newfoundland: Social transformation and community in three rural areas. In J. Parkin and M. Reed (Eds.), *The social transformation of rural Canada: New insights into community, culture and citizenship* (pp.110-130). Vancouver: UBC Press.

Markey, S., Storey, K. and Heisler, K. 2011. Fly-in/Fly-out resource development: Implications for community and regional development. In D. Carson, R. Rasmussen, P. C. Ensign, A. Taylor and L. Huskey (Eds). Demography at the Edge: Remote human populations in developed nations. Farnham, England: Ashgate Publishing.

Martin, M. 2006. ERCO and Long Harbour. Newfoundland and Labrador Heritage Website. Available at: http://www.heritage.nf.ca/law/erco.html

Migneault, J. 2014. Totten Mine opens after three-year delay. *The Northern Life*, February 21: online.

Mulligan, C. 2013. 'Rescoped' Clean AER project will still create local work: Vale rep. *The Sudbury Star*, January 17: online.

Mullings, B. 1999. Insider or outside, both or neither: some dilemmas of interviewing in a cross-cultural setting. *Geoforum*, 30: 337-350.

National Geographic Society. 2012. Placentia Area Development Association. Eastern Newfoundland Geotourism MapGuide. Available at: http://www.nlgeotourism.com/content/placentia-area-development-association/nfl1E1052173D50B438A

Northern Plains Resource Council. 2014. *Good Neighbour Agreement*. Available at: https://www.northernplains.org/issues/good-neighbor-agreement/

Perth, S. 2012. Union wary of Vale move. *The Sudbury Star*, November 7: online.

RSNL. 2014. *Chapter M 15.1 An Act Respecting the Operation of Mines and Mills in the Province*. Government of Newfoundland and Labrador.

Ryser, L. and Halseth, G. 2014. On the Edge in Rural Canada: The Changing Capacity and Role of the Voluntary Sector. *Canadian Journal of Nonprofit and Social Economy Research.* 5(1): 41-56.

Ryser, L., Markey, S., Manson, D., and Halseth, G. 2014. From boom and bust to regional waves: Development patterns in the Peace River region, British Columbia. *Journal of Rural and Community Development, 9*(1): 87-111.

Saarinen, O.W. 1971. Planning and Other Development Influences on the Spatial Organization of Urban Settlement in the Sudbury Structure. *Laurentian University Review*, 3(3): 38-70.

Sabot, E.C. 1999. Dr. Jekyl, Mr. H(i)de: the contrasting face of elites at interview. *Geoforum*, 30: 329-335.

Sagacity. 2013. Long Harbour Resident Survey.

Sara Group. 2008. *Volume I: Background, Study Organization and 2001 Soils Survey. Sudbury Area Risk Assessment*. Chapter 2.0 History of the Sudbury Smelters. Available at: http://www.sudburysoilsstudy.com/EN/indexE.htm

Schoenberger, E. 1991. The Corporate Interview as a Research Method in Economic Geography. *The Professional Geographer*, 43(2): 180-189.

Services Canada. 2014. Changes to Employment Insurance – Get the Facts. Government of Canada. Available at: http://www.servicecanada.gc.ca/eng/sc/ei/ccaj/vignettes.shtml

Sheller, M. and Urry, J. 2006. The New Mobilities Paradigm. *Environment and Planning A,* 38: 207-226

Sudbury Integrated Nickel Operation. 2014. About Us. Sudbury Integrated Nickel Operation – A Glencore Company. Available at: http://www.xstratanickelsudbury.ca/EN/AboutUs/Pages/AboutUs.aspx

Staff. 2012. Steelworkers urge councillors to reject request. *The Sudbury Star*, November 14: online.

Statistics Canada. 2012a. Division No. 1, Newfoundland and Labrador (Code 1001) and Newfoundland and Labrador (Code 10) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Available at: http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E

Statistics Canada. 2012b. Greater Sudbury / Grand Sudbury, Ontario (Code 580) and Ontario (Code 35) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Available at: http://www12.statcan.gc.ca/census-recensement/2011/dp- pd/prof/index.cfm?Lang=E

Statistics Canada. 2012c. Long Harbour-Mount Arlington Heights, Newfoundland and Labrador (Code 1001263) and Division No. 1, Newfoundland and Labrador (Code 1001) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Available at: http://www12.statcan.gc.ca/census-recensement/2011/dp- pd/prof/index.cfm?Lang=E

Storey, K. 2001. Fly-in/Fly-out and Fly-over: Mining and regional development in Western Australia, *Australian Geographer*, 32:2, 133-148

Storey, K. 2009. The Evolution of Commute Work in Canada and Australia. In Biography, Shift-labour and Socialisation in a Northern Industrial City - The Far North: Particularities of Labour and Human Socialisation. Proceedings of the International Conference in Novy Urengoy, Russia, 4th–6th December 2008.

Storey, K. 2010a. Fly-in/Fly-out: Implications for Community Sustainability. *Sustainability*, 10(2): 1161-1181.

Storey, K. 2010b. *Commuting to Alberta: The Mobile Workforce in Newfoundland and Labrador*. Unpublished report prepared on behalf of the Harris Centre, Memorial University for the Department of Human Resources, Labour and Employment, Government of Newfoundland and Labrador.

Storey, K. 2014. *I'll work here, but I don't want to live here": Tensions between FIFO work and community visions*. Presentation to the On the Move Partnership, April 23.

Sudbury & District Labour Council. 2012. Letter addressed to Dave Kilgour, Chair of the Planning Committee for Greater Sudbury. November 24.

Temple, J., Neis, B., Jackson, L., Roseman, S., Romanow, P. and Vincent C. 2011. Employment- Related Mobility and the Health of Workers, Families, and Communities: The Canadian Context. *Labour/Le Travail*, 67(Spring): 121-156

Ulrichsen, H. 2012. Premier breaks ground for $2Billion Project. *Northern Ontario Business*, June 22: online.

Vale. 2008a. Newfoundland and Labrador Limited Corporate Social Responsibility Annual Report 2008.

Vale. 2008b. Tax agreement signed with Town of Long Harbour. *The Gossan*, January, Issue 17.

Vale. 2012a. Developing our Workforce. *Newfoundland and Labrador Corporate Social Responsibility Annual Report 2011*.

Vale. 2012b. Long Harbour Construction Update. *The Gossan*. November.

Vale. 2014a. Our Business – Sudbury. Available at: http://www.vale.com/canada/en/business/mining/nickel/vale-canada/sudbury/pages/default.aspx

Vale. 2014b. *Vale's Clean AER Project*. Brochure.

VBNC. 2003. Community Liaison Committee Formed. *The Gossan*. September, Issue 02.

VBNC. 2006. Commercial Nickel Processing Plant Registered for Environmental Assessment. *The Gossan*. April, Issue 10.

VBNC. 2007a. *Environmental Impact Statement – Long Harbour Commericial Nickel Processing Plant*. Volume 1 – The Project

VBNC. 2007b. *Overview of the Long Harbour Commercial Nickel Processing Plant*. November.

Voisey's Bay Development Agreement. 2002. Voisey's Bay Development Agreement Among Her Majesty the Queen in Right of Newfoundland and Labrador and Voisey's Bay Nickel Company Limited and Vale Inco Limited.

Wallace 1993. The 1880s. In C.M. Wallace and A. Thomson (Eds), *Sudbury: Rail Town to Regional Capital* (pp.11-32). Toronto: Dundurn Press Ltd.

Walsh, D. 2012. Using Mobility to Gain Stability: Rural Household Strategies and Outcomes in Long-Distance Labour Mobility. *Journal of Rural and Community Development*, 7(3): 123-143.

LABOUR MOBILITY, NICKEL PROCESSING AND REGIONAL DEVELOPMENT: A COMPARISON OF LONG HARBOUR, NL AND SUDBURY, ON

* This is a Faculty of Arts supported postdoc, which will contribute to the Mining/Mineral Processing component of the *On the Move Partnership*

Interview guide for representatives from mining companies

Background Questions

What is your job title?

What does your company do?

How long has nickel processing been in operation at this location? (or When will it be in operation)

How many people does nickel processing employ at this location? (or how many people will be employed at this operation)?

Where were you born?

Where were you raised?

Where do you currently live?
    How long have you lived there?

Company policies and labour mobility

What percentage of your workforce travels/commutes?
    Where are they commuting from?
    What percentage travel one hour or more each way?
    Does this vary by type of employee?
    How do they commute to work? (Discuss carpool, bus, plane)

In your opinion, why do they commute?

Who pays for their commute costs? (Discuss – personal expense, if company - how)
    Who organizes the travel details/logistics?

Does this vary by type of employee?

How often do they make the trip? (e.g. daily, weekly, biweekly, etc.)
Does this vary by type of employee?

Has your company used any methods to encourage commuting? (i.e. incentives, bonuses, pay for travel; camp housing, infrastructure investments, buses)
Did you work with any community/regional partners?

Has your company used any methods to discourage commuting? (i.e. housing bonuses, allowances, interview practices)
Did you work with any community/regional partners?

Impacts and related responses of labour mobility on workers and communities

Do you face any special or unique HR challenges when it comes to mobile workers?

Does your company work with any local/community/regional organizations on these issues? If so, please provide more detail (name, history, people, process, outcomes)

Overall, what are the pros and cons of commuting for the 'work' community?

Overall what are the pros and cons of commuting for the 'home' communities?

Does your company work with any local/community/regional organizations on these issues? If so, please provide more detail (name, history, people, process, outcomes)

Overall, what do you think are the impacts of men/women working away from their home communities?

INTERVIEW GUIDES

LABOUR MOBILITY, NICKEL PROCESSING AND REGIONAL DEVELOPMENT: A COMPARISON OF LONG HARBOUR, NL AND SUDBURY, ON

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Interview guide for representatives from HOST community/ regional development organizations etc

Background Questions

What does your organization do?

What is your job title?

Where were you born?

Where were you raised?

Where do you currently live?
How long have you lived there?

Company policies and labour mobility

What percentage of your community travels/commutes?
Where are they commuting from?
Where are they working?
What percentage travel one hour or more each way?
How do they commute to work? (Discuss carpool, bus, plane)
How often do they make the trip? (e.g. daily, weekly, biweekly, etc.)

In your opinion, why do they commute?

Impacts and related responses of labour mobility on the community

Overall, what are the pros and cons of commuting on this community (i.e. infrastructure constraints; wages; labour shortage; new ideas; population growth; economic spinoffs; new housing construction)?

Has your organization responded to these issues? If so, how?

Does your organization work with any mining partners or other communities or organizations on these issues? If so, please provide more detail (name, history, people, process, outcomes, why)

Overall what are the pros and cons of commuting for the 'home' communities?

Does your organization work with any partners from 'home' communities on any of these issues?

Has your community used any methods to encourage commuting? (i.e. incentives, bonuses, pay for travel, infrastructure investments)

Did you work with the mining company or any other communities or other partners (i.e. provincial government, other organizations)?

Has your community used any methods to discourage commuting? (i.e. housing bonuses, allowances)

Did you work with any mining partners or other partners (i.e. provincial government, other organizations)?

INTERVIEW GUIDES

LABOUR MOBILITY, NICKEL PROCESSING AND REGIONAL DEVELOPMENT: A COMPARISON OF LONG HARBOUR, NL AND SUDBURY, ON

* This is a Faculty of Arts supported postdoc, which will contribute to the Mining/Mineral Processing component of the *On the Move Partnership*

Interview guide for representatives from SOURCE community/ regional development organizations etc

Background Questions

What does your organization do?

What is your job title?

Where were you born?

Where were you raised?

Where do you currently live?
How long have you lived there?

Company policies and labour mobility

What percentage of your community travels/commutes?
Where are they commuting?
Where are they working?
What percentage travel one hour or more each way?
How do they commute to work? (Discuss carpool, bus, plane)
How often do they make the trip? (e.g. daily, weekly, biweekly, etc.)

In your opinion, why do they commute?

Impacts and related responses of labour mobility on the community

Overall, what are the pros and cons of commuting on this community? (i.e. lack of volunteer; infrastructure constraints; wages; labour shortage; maintain population; housing construction)

Has your organization responded to these issues? If so, how?

Does your organization work with any mining partners or other communities or organizations on these issues? If so, please provide more detail (name, history, people, process, outcomes, why)

Overall what do you think are the pros and cons of commuting for the 'work' communities?

Does your organization work with any partners from 'work' communities on any initiatives?

Has your community used any methods to encourage commuting? (i.e. incentives, bonuses, pay for travel, infrastructure investments)

- Did you work with the mining companies or any other communities or other partners (i.e. provincial government, other organizations)?

Has your community used any methods to discourage commuting? (i.e. housing bonuses, allowances)

- Did you work with any mining partners or any other communities or other partners (i.e. provincial government, other organizations)?